THE ACORN

American River Natural History Association Members' Magazine – Spring 2021



President's Message, Spring 2021



Laurie Weir

Through all the challenges and pressures of the past year we are grateful to be strong and tackle 2021 with enthusiasm. The staff has been incredibly busy bringing innovative educational programs for children and adults alike. The American River Natural History Association Board of Directors has been very busy as well. Among other things, we have updated the Board's website, brought on new Board members, and approved a new five-year Strategic Plan.

Our new 2021-2026 Strategic Plan is a living document and will reflect adjustments over the coming five years as we procure resources and support our targeted goals. The Plan contains five key goals:

- 1. **PROGRAMS** Realize full onsite and outreach program potential based on community needs.
- 2. **SUSTAINABILITY** Secure and maintain required financial resources to support the Effie Yeaw Nature Center as the premier nature education provider in the Sacramento region.
- 3. **PEOPLE** Continue to build an exemplary team of dedicated, passionate, and skilled individuals in a positive and productive work environment.
- 4. **PHYSICAL SITE/HABITAT** Enhance the physical and structural site to provide optimal use for visitors, staff, and animals.
- 5. **BOARD CAPACITY** Enhance the membership, skills, and diversity of the American River Natural History Association Board of Directors to set direction and provide oversight of the Natural History Association and the Effie Yeaw Nature Center.

These are purposefully high level goals. They will guide the Board, staff, and volunteers as we undertake the many activities needed to meet the ambition set by the goals. Each goal will have specific implementation strategies intended to have measurable outcomes. For instance, under Goal #2 we will establish a five-year fund raising plan with annual implementation strategies to assure sufficient monetary resources to maintain and expand the Nature Center's programmatic mission. You can find the complete 2021-2026 Strategic Plan on the American River Natural History Association section of our website.

Speaking of the which, we are updating the Natural History Association's section of the website. Check it out when it is posted next month! In addition to the Strategic Plan, you will find photos and biographies for all members of our Board of Directors and an updated listing of our Associate Board as well. We are very excited to introduce two new board members: Randy Getz and Ed Smith. Ed Smith is especially relevant to the Nature Center with his 20+ years of experience at the Nature Conservancy where he has focused on forest ecology and fire management. Randy Getz is a highly-respected real estate professional with years of board member experience. Many also know him as artist Pat Mahony's husband. We will benefit from both Randy and Ed's many years of professional experience.

We have set our sights high and are ready to meet the challenges ahead. Please join us – you are the foundation for our success. We welcome your input, your time, and your continued support.

-Laurie Weir

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American River Natural History Association

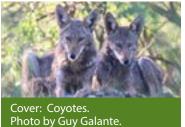
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Coyotes along the American River Parkway

By Eric Ross

Guy Galante, a Carmichael native and environmental educator, has observed, tracked, photographed, and researched coyotes for the last 15 years. Inspired by the book Coyote's Guide to Connecting with Nature, he set up his own website, Roots of Connection, create-roc.com, which promotes appreciation of nature and the American River Parkway. Through his website, and his work with numerous Parkway groups, public and private, including Effie Yeaw Nature Center, he continues to teach the importance of being good stewards of the Parkway for generations to come. Guy recently sat down with me to talk about coyotes, their complicated relationship with people in urban and suburban areas along the Parkway, and what might be done to improve it. Here is our conversation, which has been edited and condensed for length and clarity:

Share with us some basic information about coyotes: how they reproduce, what they eat, their hunting and social habits.

Coyotes are family-oriented and will typically mate for life. Their mating season is generally from January to March. When a female gets pregnant, the gestation period is 60 to 63 days. The number of pups born varies depending on food availability. The pups will be born in a small, dugout den where they'll stay for up to 8 weeks. Around June or July, the young coyotes begin to come out of the den.

The pups will stay with the adults until the fall when they become very annoying to their adult caretakers who are tired and want them out. The pups will then disperse although some younger females might stay with the parents. Then the mating season starts again.

As for diet, coyotes will eat anything they can chew. Their diet is extremely varied. In the wild, coyotes cover wide ranges because getting enough food requires travelling substantial distances to catch prey such as smaller animals



A mother coyote and her pup





and birds. In urban areas, fruits and nuts from neighborhoods can also be a huge part of a coyote's diet throughout the year. You can tell what coyotes are eating by looking at their scat (feces), which may contain fur, feathers, or the remains of fruit.

Coyotes are sly. As hunters, they can pass by humans without our even knowing it. People walking through a wild area disturb small animals, acting like "plows" that send them to the sides creating "wakes" of potential prey. Coyotes take advantage of these human plows and "wake hunt" to capture the fleeing animals. Coyotes can also be very playful. I have taken pictures of pups playing with shoes and plastic containers like dogs do.

Can you tell us about various coyote sounds and what they mean?

There are basically five sounds: barks, yips, howls, huffs or gruffs. A coyote might do a combination of a bark and a howl if it's being upset by a domestic dog. Coyotes will bark like dogs, but it will be a "bark, bark, howl, bark, bark". Howls are used to communicate among other coyotes often to take an inventory or roll call. For example, if I'm at Sacramento Bar (along the Parkway) at dusk I might hear a coyote howl "over here" and then you'll hear a companion howl from "over there" and then you'll hear howling back from across the river on the Lower Sunrise side. The huffs or gruffs directed at humans or other predators from an adult coyote mean "stay away, you are not supposed to be here." They'll also use gruffs when signaling to the pups "go back, go back, there's a human there."



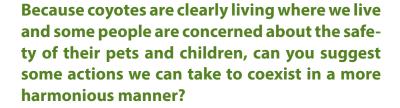




Why are coyotes living in urban and suburban Sacramento? Why don't they leave?

Let's take the two or three midtown Sacramento covotes I've been tracking as an example. They were probably living along the Sacramento or the American River down near Sutter's Landing. Why did they come into midtown Sacramento? Well, the riverside green space from the Richards Boulevard area of downtown Sacramento all the way up to Howe Avenue is very, very narrow. First, they would have to go through areas that might already be other coyotes' territories to move somewhere else. Secondly, there are a lot of homeless encampments in the lower reaches of the river that are really impacting the very few coyote habitat spaces that once existed there. Would you walk

seven miles when you can go five blocks in another direction to have access to all kinds of food and water sources in the alleys and on the streets as well as great places to hide? It's almost a conservation of energy thing. Coyotes for years had open space surrounding downtown but now there are developments such as at the Railyards and McKinley Village.



First, it would be helpful if we had a Sacramento County coyote website which could be a "one-stop shop" with a FAQs link providing clear and explicit information and resource phone numbers, including a number to call when there is a coyote incident, and a downloadable coyote information PDF. Currently, people don't know who to call and how to get their questions answered. Instead, they should be getting answers from one information source backed up by scientific research.

Secondly, there needs to be a local series of quarterly workshops with titles like "Coyotes in your Neighborhood: Come Learn More". These workshops should be used to dispel myths that aren't scientifically accurate or come from old media sources which demonized coyotes. In them, people could learn about their natural behavior and receive information about hazing techniques to



Coyotes are becoming a more common sight in urban and suburban areas.

discourage their presence without harming them such as noisemakers or water guns. They could also help people understand how they are inadvertently encouraging coyotes by providing access to food and water sources.

Can you speak about how organizations like **Project Coyote and the Humane Society of the** United States have developed "coyote management plans" and how they might work locally.

Yes. These organizations believe people can find ways to coexist with coyotes peacefully. They have designed plans based on scientific research to manage coyotes with the goals of ensuring public safety, providing education and outreach, addressing areas of concern, and, for those unique areas of concern, depending on the particular local community, how to develop a response within state law. In their plans, they offer a glossary of clear definitions, a field guide to coyote behavior, a tiered classification of coyote encounters and how to respond to them, and a hazing program. More information is available at projectcoyote.org.

Give us an example of how a city in our region has taken up its coyote issue.

Sure. The City of Davis has adapted Project Coyote's coyote management plan into its City Plan, which is a big step. When a resident calls about a coyote contact, Davis now has a way to address it using levels of contact starting from green (seeing a coyote) scaled up to red (a coyote bit my dog on leash) so the city and the public



can talk about it using the same vocabulary. Several cities throughout California have adopted various aspects of Project Coyote's plan to address their unique coyote issues.

In closing, you sound hopeful, but how solvable is our coyote situation in Sacramento?

It is solvable, but it will require a cultural shift in how we perceive coyotes living in urban areas. You need to have clear, consistent messaging and the ability for people to go to, say, a Sacramento City or County coyote website and find information that would address the urban context vs. the rural context in our County. You cannot expect ranchers in Galt who have sheep being taken to

use the same approach as urban residents concerned about pet safety in their neighborhood. Finally, it would be ideal to have dedicated county staff knowledgeable about coyotes to educate citizens, track coyote sightings, and coordinate programs to discourage coyotes where they are not wanted.

Thanks very much for your time.

Eric Ross is a Docent at Effie Yeaw, a birder, and a Certified California Naturalist. All photos were taken by Guy Galante. For more information on coyotes, see Galante's website at create-roc.com.

- An American River Journal-

Wily One By Peter Hayes

A movement among nearby trees catches the eye, but it fades out of sight. Now it reappears, a good-sized dog, perhaps a small German shepherd, loping along on an early morning hunt on the American River Parkway for its breakfast.

But viewed through binoculars, it becomes obvious this is no dog, although a near relative. With its bushy tail, sharply pointed features, and shaggy coat, it can't be anything but a coyote, a California native that could use a PR person as much as anyone.

Bumper stickers that proclaim, "Eat lamb, 50,000 coyotes can't be wrong" remind us of sheepmen's bitter complaint that coyotes dispose of three percent of their annual lamb production.

Back in the late 19th century, the State of California offered a \$5 bounty on coyotes, but had to suspend it when over-enterprising trappers threatened to deplete the treasury.

Today, sheepmen try to hold down the *Canis latrans* population through restricted use of poison*. And licensed trappers find a ready market for the long-furred coats that are used to make parkas.

But the coyote seems to survive, calling on its legendary wiliness to exist.



From "An American River Journal," published by the American River Natural History Association (ARNHA). It features illustrations by ARNHA co-founder Jo Glasson Smith and nature essays by Peter J. Hayes, retired newspaper editor and ARNHA Associate Board member. The book is available for \$9.75 at the Effie Yeaw Nature Center, SacNatureCenter.net and selected bookstores. Visit sacnaturecenter.net media/ to hear readings of the essays by the author.

*Editor's note: The use of poisons to control coyotes is now illegal in California.



Herons and Egrets: Survival in the City By Christy Berger

As natural habitats disappear, wildlife species have been forced to adapt to human-altered environments to survive. Some species adapt more readily than others, and herons and egrets are among those that have adjusted reasonably well. Around the country, herons and egrets can be found in nesting colonies (rookeries) in suburban or even urban areas like downtown Oakland. The species most often found in suburban rookeries are black-crowned night herons, snowy egrets and cattle egrets. Great egrets and great blue herons are more likely to nest in more natural wetlands farther away from human structures.



In our area, herons and egrets begin building their nests (or refurbishing old ones) in early April. You can see the birds in their beautiful breeding plumage performing dramatic mating rituals and displays as they begin the pair bonding and nest-building process. It is really fun to witness the "greeting ceremony" given whenever a member of a pair returns to its mate at the nest. During this display, feather plumes are erected, body postures and vocalizations are made, and twigs are passed from the male to the female.

Note the shallow nest construction. J. Roberson Photography.

The male chooses the nest site, begins to build, then continues gathering nesting material and presents it to the female. She will accept the twigs, finish constructing the nest, and lay the eggs. Both parents will incubate the eggs for about 25 days, and both will feed and protect the young. Juvenile herons and egrets normally leave the nest (fledge) at about 4 weeks of age, and are able to fly at 6 weeks.

It is normal for heron and egret young to fall to the ground before they are considered of "fledgling" age



Juvenile snowy egrets, cattle egrets and black-crowned night herons get lucky with a water leak at a rookery surrounding an apartment complex in the Pocket area. J. Roberson Photography.

due to several factors. The nests are typically flimsy and shallow, and each pair can lay up to 5 or 6 eggs. The siblings often fight over food and knock each other out of the nest. Thus, early mortality rates can be higher than are typical for other types of birds.

In suburban rookeries, the mortality rate is even higher. A normal wetland nesting site would have vegetation to cushion falls, but in suburban rookeries there is mostly cement or hard soil beneath the tall trees. At the North Natomas rookery, there are also large rocks and extremely thorny bushes to contend with. In a natural environment, young that fall out of the nest early can often climb back into the tree or a tall bush and continue to be fed by the parents. In suburban rookeries, the low tree branches have usually been pruned and the young are unable to get back into the tree to be fed, and those birds who do find vegetation to climb may not get fed anyway due to human disturbance. Lastly, these birds are vulnerable to metabolic bone disease, which is believed to be caused by environmental contaminants in food consumed by the parents. This condition can be treated if caught early enough.

Sacramento Heron and Egret Rescue (SHER) was founded in 2015 after a nestling black-crowned night heron was brought into Wildlife Care Association (WCA) in Sacramento with a stick jabbed about 2 inches deep into its back. It had been found at a North Natomas apartment complex. The bird survived, but Brianna Abeyta, the animal care manager at that time and I were determined to do something to help, as this appeared to have been a purposeful act. The injured and orphaned young on the ground at this rookery surrounding a busy apartment complex were extremely vulnerable to abuse, as well as vehicles, dogs and cats.

One person at the apartment complex was trying to rescue all of the injured young birds herself, bringing 5 to 10 injured and orphaned young to WCA every day. Brianna and I put our heads together, created a Facebook group for communication, recruited volunteers, and





provided training to help ensure that only those birds that truly needed help were rescued. Through dedicated volunteers, SHER has worked to alleviate suffering

every nesting season since.

SHER volunteers currently monitor two mixed rookeries daily during nesting season for injured and orphaned young. The nesting colonies we monitor are fairly large with about 150 nests at the Pocket area location and 70 nests at the North Natomas site. There may be up to 20 nests in a single tree. In a natural environment (typically a wetland), rookeries can be huge, sometimes containing 500 of even 1,000 or more nests.

Are these herons and egrets endangered species? The black-crowned night heron is not listed as endangered, but Audubon has classified the species as climate-endangered. Audubon's models estimate that in North America, if climate change continues at its current pace just 12% of their summer range will remain stable by 2080. Snowy egrets, cattle egrets, great egrets, and great blue herons are of low conservation concern according to Cornell Lab or Ornithology.

The best time to view rookeries is from April to August. There are several sites in Sacramento including suburban locations and more natural wetland areas. Table 1 lists five sites you can visit in our area.

If you would like to volunteer or find out more about SHER, including efforts to preserve a large pond containing over 500 heron and egret nests on the Sleep Train Arena property, see sacheronsave.org.

Christy Berger is the co-founder of Sacramento Heron and Egret Rescue, an all-volunteer group that rescues injured and orphaned birds from nesting colonies in busy suburban areas. Christy is also a board member with Gold Country Wildlife Rescue.

Christy will be offering a class through the Effie Yeaw Nature Center in May of 2021 where she will discuss each species' natural history, their nesting habits, and Sacramento Heron and Egret Rescue's efforts to prevent suffering in collaboration with local wildlife rehabilitation facilities.



Top: Rescued nestling black-crowned night heron that had been jabbed with a stick 2" deep into the back. Below: The same bird after recovery at Gold Country Wildlife Rescue. Photos by Brianna Abeyta.

Table 1. Sacramento Heron and Egret Rookeries: View them from April to August

<u>Suburban Rookeries (black-crowned night herons, snowy egrets and cattle egrets):</u>

- Waterford Cove Apartments (Pocket area of South Sacramento)
- "River Birch Park Site" behind the Tuscaro Apartments in North Natomas

Other local wetland rookeries (great egrets, great blue herons and more):

- Cosumnes River Preserve (Horseshoe Lake)
- William B. Pond Recreation Area (At the first parking lot, cross the bike path near the restrooms and take the paved path. At the gravel ranger road, go south for about 200 ft and then take the next gravel road on the left. When you get to the river, take the trail on the right until you get to a natural end point, and look to the other side.)
- Highway 65 in Lincoln, viewable from the McDonald's parking lot.

Invasive Plants at Effie Yeaw

By Dennis Eckhart

"Non-native" plants are interlopers, introduced from somewhere else, either on purpose or by accident. California's "Mediterranean" climate creates a hospitable environment for many plant species native to North Africa, the Middle East and Southern Europe. A non-native species is considered "invasive" if it reproduces readily and spreads rapidly, robbing native plants of the sunlight, nutrients, and water that they need to thrive. Non-native plants typically have no natural predators in their new home, nor do they benefit native insects or animals. They can quickly take over an ecological niche, creating a monoculture – the antithesis of biodiversity.

At the top of the list of invasive plants infesting the American River Parkway is red or scarlet sesbania (*Sesbania punicea*), a South American native sometimes planted as an ornamental shrub. Fortunately it isn't often found in the Effie Yeaw Nature Study Area. However, another invasive member of the pea family, Spanish broom (*Spartium junceum*) can be a problem.



Spanish broom growing in cobbles.

Introduced as a landscape ornamental and planted along highways to prevent erosion, Spanish broom's long, stiff, upright stems retain their green color all year long. Bright yellow flowers appear in the spring and by summer hundreds of seed pods appear on mature plants. Its taproot penetrates even the hard, dry, cobble-strewn area below the Riverview Trail, seeking moisture several feet underground. Left alone, Spanish broom can grow 10 feet high in just a few years. In the 1980s a labor-intensive effort by volunteer "weed warriors," dug out hundreds of very large broom plants from the NSA. Control of Spanish broom requires persistence as the



Weed-wrench for broom removal.

seeds remain viable in the soil for many Sprouts can years. be pulled by hand, but even small plants can have roots that extend several feet below the surface, requiring digging and extraction by a special tool called weed-wrench (left). In 2019 and 2020

alone, volunteers pulled well over 12,000 Spanish broom plants from the NSA.

Another invasive of concern is stinkwort (*Dittrichia graveolens*), a native of North Africa. This annual weed has invaded the cobble area below the Riverview Trail from the "pirate ship" eucalyptus to the north end of the Nature Study Area. Since its first sightings in California in the 1980s, stinkwort has spread rapidly along highways, hiking trails and other areas where the soil has been disturbed by grading or, as in the case of the Nature Study Area, by periodic flooding. Similar in appearance to Russian thistle (commonly known as tumbleweed), stinkwort is in the sunflower family. Mature plants can reach three feet in height and width. Tiny orange flowers appear in late summer, and within a few weeks thousands of seeds form in fuzzy white balls.



Stinkwort in bloom.



Stinkwort produces an oily substance that can cause dermatitis in some people, although the rash is not as severe as that caused by poison oak. In the fall of 2017, volunteers began a concerted effort to stop the spread of stinkwort in the Nature Study Area by hand pulling and bagging any flowering or seed-bearing plants. Finally in 2020 the entire area of infestation was cleared for the first time.

Without a doubt, the award for most annoying weed in the NSA belongs to yellow starthistle (*Centaurea solstitialis*). The sharp spines that encircle the base of each bright yellow flower are the bane of anyone walking the trails in the Nature Study Area. Even after the flowers are long gone, the spines remain to poke and scratch uncovered skin, and the dry, brown plants become fuel for fires along the Parkway. In summer and fall lesser



Lesser goldfinch feeding on yellow starthistle seeds in late summer.

goldfinches (*Spinus psaltria*) are often seen perched precariously on the stalks eating the seeds, but few people have anything good to say about this pernicious weed. Efforts to control yellow starthistle in the Nature Study Area have included mowing and hand-pulling. A recent campaign was undertaken by volunteers working on the Monarch Habitat Restoration Project. Much of the approximately one-third acre restoration site was infested with starthistle when work began in the spring of 2020. Over 3000 plants were removed. When spring 2021 rolls around, we'll find out just how successful we have been in limiting its spread in this special area. Controlling yellow starthistle will take a concerted and sustained effort over many years.

Milk thistle (*Silybum marianum*) is another annual thistle that has been a target of volunteer eradication efforts.

This thistle grows mostly in shady areas and has dark green leaves that are spiky and have milky white veins. Globe-shaped, purple flowers at the top of tall stalks are hard to miss along the oak-shaded trails in spring and early summer. The flowers attract butterflies; but dense stands of milk thistle outcompete native plants, and milk thistle is known to be toxic to some ruminants. Hand-pulling before the plant flowers is an effective way of controlling its spread.



Milk thistle.

When you're out exploring and enjoying the Nature Study Area – or anywhere on the Parkway for that matter - keep an eye out for these non-native invaders. We can all help prevent the spread of invasive plants by staying on trails and trying to avoid brushing up against plants growing alongside, so as not to spread the seeds (which is also a good way of avoiding ticks). When walking a dog on the parkway - outside the Nature Study Area, of course – don't let it run off trail where seeds can easily get caught in its fur. When leaving, check the dog's coat, as well as your own shoes and pant legs, to remove any seeds that might be hitching a ride to your next destination. When selecting plants for your garden, skip the non-native invaders and opt for native species. If you're interested in helping eliminate invasive plants from the Nature Study Area, check with the staff at Effie Yeaw Nature Center for volunteer opportunities in invasive-plant removal and other habitat-restoration projects.

Dennis Eckhart is an attorney, nature photographer, and Invasive Plant Management Steward at the American River Parkway Foundation, whose video on invasive plants features Dennis. (youtube.com/watch?v=pdYodpCKj0Y) In 2017 Dennis became a certified California Naturalist at EYNC and began eradicating stinkwort in the Nature Study Area. All photos in this article were taken by Dennis.



The Bird Ambassadors of Effie Yeaw Nature Center

By Joey Johnson

Last issue, we visited the Animal Care department and learned about the reptiles and amphibians who serve as Animal Ambassadors. In this issue, we return to learn about our avian ambassadors. We currently have four raptors living at the Effie Yeaw Nature Center (EYNC). Each bird has a special reason why it cannot be released back into the wild.

Echo, the great horned owl, was found during the fall of 2011 in the South Lake Tahoe area making begging calls in the night. A volunteer rehabilitator heard the bird and called to it. Echo flew right down to the rehabilitator and readily ate the food that was offered. This behavior unfortunately meant that Echo was imprinted or raised by humans as a young owl and did not know how to hunt for food. Lake Tahoe Wildlife Care contacted the Effie Yeaw Nature Center with hopes that we could provide a home for her.



Photo by James Hargrove.

Fortunately we were able to take her in, having recently lost Virginia, who had been our great horned owl ambassador for many years. Echo is calm around people, has been trained for careful handling by Nature Center staff, and plays an important role as a full-fledged educational ambassador.

Ke-lik-a-lik is a beautiful male

American kestrel! Ke-lik-a-lik is the Nisenan Maidu word for this tiny falcon, and the sound of the name mimics the American kestrel's call. Ke-lik-a-lik was rescued from the mouth of a dog and had sustained quite a few injuries. He went through extensive rehabilitation at the UC Davis Raptor Center until he was able to come to his permanent home at EYNC in late 2019.



Photo by Joey Johnson.

Wek'-Wek, a peregrine falcon, came to the Effie Yeaw Nature Center in 2017, also from Lake Tahoe Wildlife Care. She was brought in with injuries af-

ter being shot in both wings. Because these injuries, Wek-Wek's ability to fly was permanently impaired, making her non-releasable. With permission from the U.S. Fish & Wildlife Service, Lake Tahoe Wildlife Care transferred her to the Nature Center. Wek'-Wek has been a quick Photo by Joey Johnson.



learner and has become comfortable on the glove and around people. When Wek'-Wek came to the Nature Center she was a young bird and had her juvenile plumage. She has matured and now displays adult coloring and patterns.

Orion, the Swainson's hawk, was dropped off at the UC Davis Raptor Center with a broken wing in 2017. Although his injuries healed partially, there were some lingering issues that would prevent him from completing the long winter migration down to Argentina. It was also discovered that Orion had imprinted on people, meaning he lacked a natural fear of them and might be dependent on people for his survival. However, Orion's comfort with being around people resulted in an easier transition as he prepared to become one of our amazing Animal Ambassadors. If you visit the Nature Center when Orion is in the front enclosure, he will watch you intently and turn his head upside down to take a look at you.



Photo by James Hargrove.



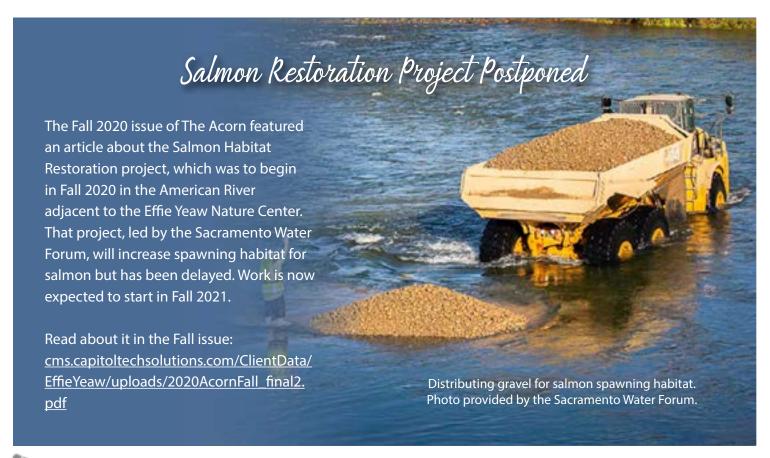
Providing a healthy home for these raptors, who would normally be outside hunting and flying free among the trees, presents challenges. One such challenge is weight management. The staff and volunteers carefully track and control how much food each bird gets. They are weighed weekly, except for Ke-lik-a-lik, the smallest and the newest resident, who is weighed twice a week. He is also being trained, so he is given a lighter diet to ensure that he will respond to food rewards during training. Because their activity level is relatively low, captive raptors are at risk of putting on too much weight, which can negatively affect their health, a problem many of us humans also face.

Our raptors' diets consist of small rodents, chicks, and an occasional quail, all of which are purchased frozen and then thawed and prepped. Each bird has personal preferences for types of food. While raptors may not eat every day in the wild, at EYNC, they are fed daily, partly to maintain a routine for the animals. They are also given access to fresh air and sunshine outside of their enclosures.

The raptors live in a building called "the mews" when they are not in one of the enclosures in the lobby. Each has an enclosure that meets their size needs. The mews building was constructed in 1976 when the Nature Center first opened. It is adequate for our ambassadors at this time, but it is aging and is not ideal. There are plans being developed for replacing this structure with a new aviary that will provide more space for the current residents, allow us to add new birds to the program, and give Animal Care staff and volunteers better access to the enclosures. The planning and subsequent construction of a new aviary will be complicated and a major financial undertaking when it is time to make the plans a reality.

While all of the EYNC Animal Ambassadors are key to the mission of the Nature Center, the raptors are often the stars of the show. They are a critical component of our programs for educating people of all ages and backgrounds about the local environment. They give people a rare opportunity to see wild animals up close and to appreciate their importance in our world.

Joey Johnson is Past President of ARNHA, a photographer and a nature lover.





Jackie DeLu, Featured Volunteer

By Margaret Leavitt

Jackie DeLu doesn't hesitate when you ask her what she finds most satisfying about her involvement with Effie Yeaw Nature Center and the American River Natural History Association. "It's being with passionate people who believe in the mission of science and nature education," she says – people who share Jackie's commitment to educating children to be future stewards of our natural world.

When Jackie retired in 2005 from her career as a seventh-grade science teacher, she knew that she wanted to continue her dedication to science education by volunteering as a docent at Effie Yeaw. That initial role, introducing the wonders of nature to school groups, has since expanded in ways she hadn't anticipated.

As part of the Education Committee, Jackie, along with several other docents, expanded EYNC programs to reinforce new California science standards. A shift from presenting facts to guided exploration has had the benefit of more time spent in the Nature Study Area, as each school group has time to explore the trails all the way to the American River.

It is so rewarding, says Jackie, to see the faces of students when they first catch sight of the river. Some of them may be seeing a river for the first time.

Students can stand next to the river and observe for themselves the important roles the river plays in the natural setting. "There are so many things out there to talk about!" Jackie explains with the enthusiasm and passion that make her such an effective teacher.

After several years as a volunteer, Jackie joined the ARNHA Board, bringing to the Board the perspective of a science educator and volunteer docent. Jackie was initially surprised at the number of different issues the Board addresses in its stewardship of EYNC: personnel, insurance, finances, among others. "It's a huge responsibility," she says.

Jackie has found other ways to contribute to EYNC as well. She has helped plan museum exhibits and day camps and volunteered for events and tasks – even yellow starthistle removal! She and Margaret Rogers create items to sell at the Holiday Sale, and gift baskets to raffle at Bird and Breakfast. Recently, Jackie has gotten involved in that common pandemic pastime of decluttering – only in her case, it's involved sorting through the EYNC and ARNHA storage space, something she describes wryly as a labor of love.

This past year, Jackie's generosity and commitment to EYNC and ARNHA manifested itself in a significant way. From her time on the Board and her husband's involvement with another non-profit, Jackie knew how challenging it is for EYNC staff to have to constantly focus on raising funds while trying to meet the organization's mission. To help EYNC and ARNHA address that challenge, and to support the Development staff, Jackie and her husband, Michael Covey, made a very generous gift, part of which has been used to hire a short-term, experienced grant writer to establish a sustainable grant process that will assist the staff and the mission of EYNC and ARNHA for many years to come.



Jackie DeLu guiding young visitors to Effie Yeaw.







Follow us on Facebook and Instagram to keep up-todate on the latest happenings at the Nature Center and in the Nature Study Area, discover fun facts about plants and animals, and join us on Facebook LIVE! for 'Ask a Naturalist' and more!

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Did you know the Nature Center has a blog featuring fun articles about creatures, critters, and all kinds of life that can be found our region! The blog is also home to our new online environmental education program, 'Ask a Naturalist': Learn, create, and activate! Check it out: sacnaturecenter.net/visit-us/nature-blog/



Discover our region with activity and nature guides, children's books, and more created and published by the American River Natural History Association—the non-profit organization that runs the Effie Yeaw Nature Center. Shop Books: sacnaturecenter.net/arnha/shop-books/



A quarterly digital magazine for members featuring articles about our regional natural world, events at the Nature Center, volunteer features and opportunities, and more! Take a look at *The Acorn* archive:

sacnaturecenter.net/arnha/acorn-newsletter/





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