THE ACORN

American River Natural History Association Quarterly Magazine – Fall 2021



President's Message, Fall 2021



Laurie Weir

We have good news! Our Big Day of Giving was a record-breaking success raising \$70,000 in May, and our Annual Spring Gala and Auction was sold out and brought in about \$100,000 for the Nature Center. We had great art, travel, vacation stays, gourmet meals, wine, and nature experiences auctioned by a professional auctioneer. But most of all it was a great cause and a good reason to have fun back out under the oaks at the Nature Center!

Whether it is finding new ways to support the Nature Center or organizing all of the complex logistics behind the BigDOG and Spring Gala, our staff deserves great kudos for their incredibly hard work and dedication! Behind each of

our educational programs and fundraising events are a highly trained and talented staff that work long hours and coordinate efforts of volunteers to make it all happen seamlessly. The Board of Directors appreciates and thanks staff for their hard work and continued successful events and programs at the Nature Center!

In our effort to continually improve and seek creative ways to solve problems, we have established a new way for donors to contribute to Effie Yeaw Nature Center. In light of the raising stock market, I'm guessing some have benefited from increased value in investment accounts. Now for the first time, we have established a process where it is possible to contribute by transferring stock to support the Effie Yeaw Nature Center while allowing the contributor to access potential benefits associated with the transfer.

Donating appreciated stock is one of the easiest ways to give more to nonprofit organizations (like Effie Yeaw) that you care about. There are several good reasons to donate stock: you can give more, you can potentially reduce future capital gains, you can give your portfolio a "health check" or re-balance as needed, and you can donate stocks without headaches because we have established an easy process to make it happen!

Of course, we recommend you check with your financial or tax advisor for decisions such as this. For those of you that may be able to participate in this program, we hope you will look into it. We will soon be adding more information about this program on our website at <u>sacnaturecenter.net</u>.

As always, it is you, our membership and community, that we thank for your generous contributions and support. Your continued support for our educational programs and events such as Bird and Breakfast Weekend, Spring Gala, Owl-O-Ween, and the Holiday Sale are critical to our continued success. We could not do this without you!

-Laurie Weir

The Acorn is published quarterly by the American River Natural History Association (ARNHA), a 501(c)(3) non-profit organization that supports the Effie Yeaw Nature Center and Nature Study Area.

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Editor: Mary Louise Flint

Design and Layout: Katherine Roberts

Members: Krystin Dozier, Joey Johnson, Michael Kwong, Margaret Leavitt, Eric Ross, Kelly Seck

American River Natural History Association

Effie Yeaw Nature Center 2850 San Lorenzo Way Carmichael, CA 95608

916-489-4918

Website SacNatureCenter.net

Email info@SacNatureCenter.net







Wood Ducks at Effie Yeaw

By Eric Ross



There are many pleasures for those walking the nature trails at Effie Yeaw Nature Center (EYNC). One is spotting a male wood duck, a bird that looks as if it's been designed by a fashion house. With a patterned green, black, and white head; a drooping crest; almond-shaped red eye rings; a multi-colored bill; a speckled, rusty breast with black and white borders; yellowish-tan flanks; and iridescent body feathers, including blue wing patches; this bird is truly a thing of beauty.

Equally good-looking, though less gaudy than the drake, is the brown-gray female wood duck. She displays a speckled breast, white throat, iridescent feathers, and teardrop-shaped white eye rings, pointed at the rear.

So why the spectacular colors on the male? There is not one definitive answer, but generally scientists believe that strong evolutionary pressures contributed to the distinctive feather coloring in males to make them appear healthier, stronger, and more attractive to females in their competition with other drakes. At the same time, the females' drabber coloring provides them camouflage while they are rearing their young.

In the wild, wood ducks live an average of four years. Like most other ducks, wood ducks do not maintain long-term pair bonds. They usually pair in late winter, mate, and remain together only through the incubation period until the eggs hatch. The hens regularly produce two broods a year.

In early spring, wood duck pairs search for nest sites together. The hen inspects possible sites and selects one, usually a natural tree cavity or man-made nesting box. Typically, a hen lays an egg a day until her clutch amounts to 10 to 12 eggs.

While the eggs are laid, the hen uses materials from the tree cavity or nest box and her body to warm the clutch; she supplements those materials by pulling feathers and down from her belly. When the clutch is complete, significant amounts of down and belly feathers will help insulate the eggs, particularly when the hen leaves the nest for short periods in the early morning and late afternoon to feed. Studies show wood duck eggs regularly hatch after 28 to 32 days of incubation.

Interestingly, wood duck ducklings leave their nests within 24 hours after hatching, often falling significant distances to the ground or water without harm after clawing their way out of the nest cavity or box. Leaving rapidly is critical since the hen does not feed her young in the nest.

The hen will lead the ducklings to water and food sources where they instinctively feed themselves. At first, the hen will brood her ducklings at night or during cold times by sitting on them. Small ducklings will sometimes ride on their mother's back when she is swimming. The ducklings will spend up to eight weeks with mom while they grow from one ounce to a pound in weight; within 60 to 70 days usually they are flying!





Wood ducks thrive in riparian habitats, such as along the lower American River Parkway, where they can find the rich food sources and shaded cover they require. They are known as "dabbling ducks" because they feed on the surface of water sources or by doing shallow diving.

A likely place to see wood ducks is at the EYNC Nature Study Area Pond on the Pond Trail during their nesting and brood-rearing periods in late winter and spring. They forage mornings and evenings in the shallow water finding protein from invertebrates (insects, worms, and snails) and also seeds from moist soil plants (duckweed and watergrass). During non-breeding periods, wood ducks will feed on other plant foods such as acorns or agricultural field corn and rice found locally.

After breeding season and throughout the rest of the year, wood ducks can be seen flying around and floating on the American River adjacent to the preserve and occasionally floating in the pond in the Maidu village near the parking lot.

Enjoy the presence of this attractive and fascinating bird species at EYNC!



The colorful male wood duck in a tree. Wood ducks are one of the few ducks with claws on their feet, which allow them to climb trees.

Eric Ross is a Docent at Effie Yeaw, a Certified California Naturalist, and was a wood duck box monitor at Consumnes River Preserve from 2006-2009.

All photos were taken by Katherine Roberts.

Back Together Again for the Spring Gala

The 2021 Annual Spring Gala and Auction on June 13 was a success and brought in about \$100,000 for Effie Yeaw Nature Center. Great art, travel, vacation stays, gourmet meals, wine and nature experiences were sold to the highest bidder by a professional auctioneer. A sold-out crowd of nearly 250 people attended in person and enjoyed a delicious catered meal serenaded by the Garden Strings Ensemble, a triple-string quartet. Others participated online in a silent auction, Fund-A-Need, and viewed the live auction from home. For those able to attend, it was wonderful to meet again under the oaks in the EYNC village. *Thank you to all the staff, volunteers, sponsors, and attendees who made this event a success.*







Bird Nesting Box Monitoring at EYNC By Mary Louise Flint

For the last six years, Effie Yeaw volunteers have been tracking the reproductive biology of some of our local birds by monitoring nesting boxes at Effie Yeaw Nature Center (EYNC) and in the neighboring fields in Ancil Hoffman Park. I was lucky enough to have Cal Naturalist student Emily Boling take me on a tour of the boxes at the height of the nesting season in May 2021. Most of the boxes had active nests. Several times we experienced a fierce scolding from angry parents upset at our spying on their offspring, but the monitoring clearly did not deter the birds' parenting instincts.



The nesting boxes have two holes so parents can escape during monitoring.

The project was started by California Naturalist students Elizabeth Dolezal and Erin Hauge in 2014 and has continued most years since (with a hiatus in 2020 due to Covid-19) as a class project by participants in the California Naturalist Program. EYNC staff member Dorothy Wagner took it up as

a Cal Naturalist project in 2019 (with help from Stephanie Wattson). This year Emily Boling continued the project under Dorothy's mentorship.

This is a true citizen science project involving volunteers collecting local field information for a global database. It follows guidelines from NestWatch, an international nest-monitoring program designed to track the status and trends in the reproductive biology of birds. NestWatch operates under the Cornell Lab of Ornithology umbrella.



Dorothy Wagner and Diane McKernon check nesting boxes with a step ladder.



Emily Boling checks a nesting box with new device incorporating an endoscope and iPhone developed by Patrick Wagner.

In 2020, participants followed 31,529 nests in 42 countries, although the vast majority were in the US and Canada. You can find out more about NestWatch and even establish your own nesting box observation program by looking at their web site at NestWatch.org.

The nest boxes in use at Effie Yeaw were built by local Boy Scout Troop 217 in 2016. The unique de-

sign has two holes so adult birds can escape if the camera makes them nervous. Entry hole size determines which bird species is likely to occupy the box and keeps larger predators out. Boxes at our site were designed to be hung from tree branches about 7 to 10 feet off the ground. Sites were selected based on tree branch height and distance from other nest sites.

Originally, monitors had to climb up on a step ladder and open a door in the nesting box to check nest activity and take a photo. In 2019 Dorothy Wagner's husband, Patrick Wagner, designed and built a nest monitoring tool that incorporated a



A view from the observation camera: Turkey feathers are a clue that swallows have occupied this nesting box.

sewer pipe camera (or endoscope) on the end of a long pole, eliminating the need for the step ladder. The tip of the pole with the camera and a light is slipped into the nest box to see the status of the nest and any eggs or chicks within and a photo is recorded on an iPhone. In 2021 the tool was upgraded to record color photos.



At EYNC, observations are made weekly from early March through midsummer when nesting ends. In 2021, 11 boxes were being observed. One is located in the EYNC village and the rest around the game field across the road from



village and the rest Wrens' nests are made primarily of around the game field sticks.

the EYNC parking lot. Observers note nest status and materials, presence and number of eggs and chicks, age of chicks, and activities of adults seen in or around the nest.



A female western bluebird rests in her grassy nest in this box.

The three species of birds inhabiting the nest boxes at EYNC in 2021 were tree swallows, house wrens, and western blue birds. In 2017 and 2019, oak titmouse also nested in the boxes. Even if the birds or eggs

are not present, it is fairly easy to recognize which birds are inhabiting the boxes. Wren nests are made primarily of sticks. Blue bird nests usually have soft grass, and

swallows like to incorporate turkey feathers into their nests. The photos taken in the monitoring process show intimate pictures of the nests and birds and provide a vivid record of the birds' development.



Bluebird eggs.

This year the first eggs were seen on April 2 and began to hatch about 2 weeks later. Bluebirds took somewhat longer than wrens or swallows to develop from egg to



The bluebird eggs have hatched into chicks!

fledgling. Eggs continued to be laid in late May and some birds seemed to be making a second nest in the bird boxes. Table 1 shows the success of the three species nesting in the Effie Yeaw boxes in spring 2021.

Mary Louise Flint, Ph.D. is a docent at EYNC and Extension Entomologist Emerita at the Department of Entomology and Nematology, UC Davis. Special thanks to California Naturalists Emily Boling and Dorothy Wagner for help with this article and supplying photographs.

2021 Nest Box Monitoring Data through May*

Species	Earliest egg date	Earliest Fledge date	# days egg to fledge	Total nests	Total # eggs	Total # fledglings	Nesting success rate (%)	Mean clutch size	Mean fledglings
Tree Swallow	4/15/21	5/17/21	32	1	5	5	100%	5	5
House Wren	4/14/21	5/15/21	31	2	15	9	60%	7.5	4.5
Western Bluebird	4/2/21	5/12/21	40	3	17	12	71%	5.7	4

^{*}A few birds made second nests in late May and June. These are not included.



Tracking Nature with iNaturalist By Krystin Dozier



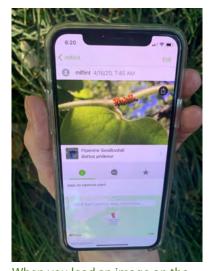
While you wander along the trails observing nature, do you see plants, insects, or other critters that you can't identity? Do you value learning more about the natural world around you? Or perhaps you enjoy taking photo-

graphs of things you see? If your answer to any of these questions is "yes", you should consider trying out a free and easy-to-use app called *iNaturalist* on your phone or computer.

HOW IT WORKS



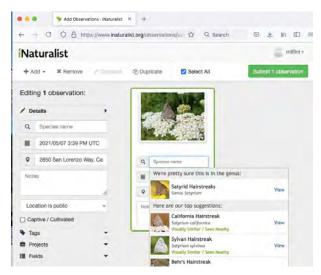
iNaturalist is a great way to identify and share the plants and animals you observe in nature.



When you load an image on the *iNaturalist* app on your phone, it maps your location right on the spot.

Using the *iNaturalist* app is a great way to identify organisms you find out in nature. You simply take a photograph of the plant or animal, load it onto the app, and the program will give you a list of similar-looking species that are found right where you are. It will also provide additional photos and information about each of the possible options. You can keep your own personal record of plants and animals you've identified for future reference.

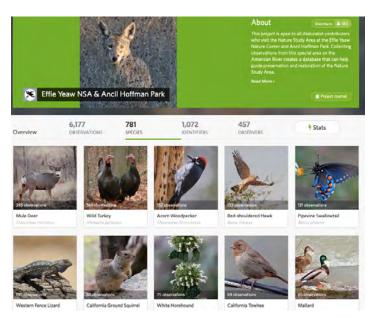
iNaturalist also allows you to become a citizen scientist and add your observations to databases that scientists can access to study the natural world. Site-specific observations of plants and animals provided by citizen scientists throughout the year and across a myriad of



If you submit a photo to *iNaturalist*, it sends a list of suggested identifications. In this case it has correctly identified a California hairstreak butterfly. This screen shot is from a computer.

locations greatly expand scientists' ability to gather data and better understand issues such as impact of climate change, changes in animal migrations, and population shifts.

Citizen science is defined as "the practice of public participation and collaboration in scientific research to increase scientific knowledge." Through citizen science, people share and contribute to data monitoring and collection programs." You can be part of this trend by using iNaturalist.



The Effie Yeaw NSA & Ancil Hoffman Park Project had 781 species listed in late June 2021.



Observations made on iNaturalist within the boundaries of the Effie Yeaw Nature Study Area (NSA) and Ancil Hoffman Park are now automatically collected into a project specifically for the Effie Yeaw Nature Center (EYNC) area. This allows us to track and analyze the number and types of sightings made within the park boundaries. Many times birdwatchers or amateur photographers come into the Center and show us their amazing pictures of birds, coyotes, deer in full rut, or other sightings. Other times they share a photo of a plant or insect they can't identify. Now those photos, if taken on the phone app or uploaded into the iNaturalist app from a camera, can automatically be logged as an EYNC observation and contribute through citizen science to our long-term understanding of the flora and fauna in our Nature Study Area. You can see what plants animals have already been identified for www.inaturalist.org/projects/effieyeaw-nsa-ancil-hoffman-park.

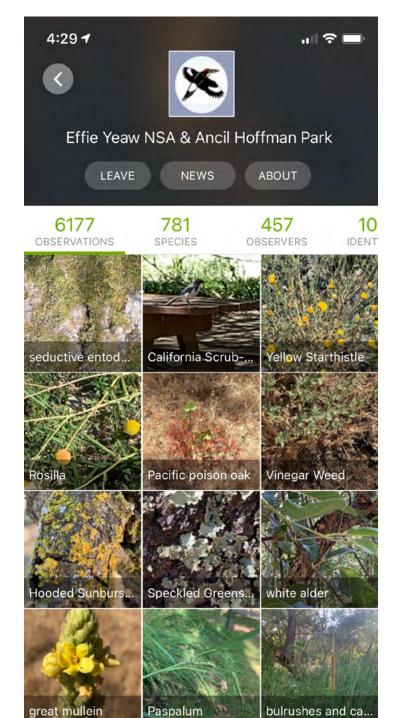
If you don't already have access to *iNaturalist*, give it a try. Not only do you contribute to science, you can identify species that you don't already know. When you take a picture, called an observation, the app will offer suggestions for what the plant or animal might be based on the photo. If you see a match, you can select that. If you are unsure, other users can offer their suggestions, which you can agree with or ignore. Only two reviews are needed to make an observation "research grade", which is what is needed for scientists to have valid useable meta-data. If you are already a seasoned naturalist and can identify what you see, contribute by reviewing observations from others to confirm or suggest a different species. This gives *iNaturalist* users feedback and improves observations to make them research grade.

Download the free app and start posting your observations to support citizen science and the EYNC collection project. For more information on how to download and start using *iNaturalist*, <u>click here</u> or go to the *iNaturalist* web site at <u>iNaturalist.org</u>. A connection to a cell phone service or Wi-Fi is required to get identification information, so be sure your phone is well charged because Effie Yeaw has no public Wi-Fi in the Nature Study Area.

You can use *iNaturalist* on an iPhone, Android, tablet, or computer application. If using your phone, observations can be directly made in the app and the date, time, and location will be automatically entered. If you are using a camera, you will need to upload your photos into the computer version of *iNaturalist*. If you have date and location settings on your camera turned on, these can be uploaded with your photos. If not, you will need to manually add this information to your observations.

So, go out and enjoy the natural world around you, share your observations, become a citizen scientist, and add to our understanding of the animals and plants that inhabit EYNC!

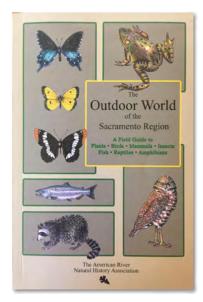
Krystin Dozier is a certified California Naturalist, volunteer docent and receptionist at EYNC. She has found friendship, relaxation and joy in exploring nature following retirement as a critical care nurse and administrator in Sacramento.



This is what the Effie Yeaw Project site looks like on a phone screen.



The Outdoor World of the Sacramento Region



If you can only purchase one nature book about the Sacramento area, The Outdoor World should be your unquestionable choice. With over 600 species of plants and animals pictured and described, this is by far the best natural history book for the region.

Unlike other nature field guides which cover animals or plants from

throughout the state or even the western U.S. region, this book focuses on the species you are likely to find here, narrowing your choices to allow easier identification.

Published by the American River Natural History Association and now in its 13th Edition, Outdoor World began as a Natural History Guide for the Sacramento Region first written by Effie Yeaw as principal author in 1963. The book has been revised, edited, republished, and more beautifully illustrated over the years and covers plants, birds, mammals, reptiles, amphibians, fish, and invertebrates as well as a brief introduction to geology, land forms, and the original people of California. The current version was edited by Peter Hayes, Molly Keller, and Peggy Kraus Kennedy.

The book is available for \$16.95 at the Discovery Store at Effie Yeaw or online at www.sacnaturecenter.net/arnha/shop-books/. See sample pages at cms.capitoltechsolutions.com/clientData/EffieYeaw/uploads/OW2013Sam-plePages.pdf.

By purchasing this book, you help support the American River Natural History Association and Effie Yeaw Nature Center.

Invasive Plant Species Kiosk



In support of Invasive Species Week in May, a new Boot Brush Station was installed at the Main Trail trailhead to educate the public about invasive plant species common to Sacramento and how they spread. Dennis Eckhart, a long-time trail steward and weed remover, constructed the station and docent Cindy Rogers created the signage.



Yellow starthistle is one of the most common and annoying invasive plants at EYNC.



Eleven Years and Still Going Strong By Joey Johnson

It is likely that everyone at some point in their life has had one of those "oh no!" moments, when you realize that something that has been rolling along smoothly for many years is about to change drastically and if you don't do something quickly, you may lose it. Such a moment was experienced by the American River Natural History Association (ARNHA) and the Effie Yeaw Nature Center (EYNC) in 2010.

ARNHA, a nonprofit membership organization, was founded in 1981 to support educational and interpretive activities in the American River Parkway in cooperation with the Sacramento County's EYNC. ARNHA's founding members had a deep love of nature and saw the Nature Center as a way of sharing that passion with others.

From its inception, a major focus for ARNHA was creating and distributing high-quality publications to educate the public about this area's natural history and its first people. ARNHA's field guide, *The Outdoor World of the Sacramento Region*, has been in print for 46 years, and remains the authoritative guide to the flora and fauna along the parkway. (See page 8.) ARNHA publications are still sold today at the Discovery Store in the museum building, online at the EYNC website, and at local retailers.

In 2010, ARNHA took on significant new responsibilities. Prior to 2010, EYNC was operated by the Sacramento Regional County Parks Department. Starting in 2008, the Great Recession hit California parks and nature centers hard and many closed. Past issues of *The Acorn* magazine reveal ARNHA's attempts to increase fundraising during this time, holding the first of what would become the annual Spring Auction and Gala. The community also stepped up to try to fill the budget gap as the County cut more and more funding for EYNC.

Over time it became apparent that these efforts were not going to be enough to keep the Nature Center open as a county facility. Around the state, nonprofits were taking over operations to save the parks and centers that they loved. ARNHA began negotiating with the Sacramento Regional Parks Department and the county supervisors to transfer EYNC operations to ARNHA.



Auctioneer David Stone invites bids from attendees at the Effie Yeaw Nature Area Preserve for the 1st annual Where the Wild Things Are art sale and gala.



Larry Washington, ARNHA Board President during times of crisis, 2007-2011.

On July 4, 2010, the county handed over operations of the EYNC to ARNHA. The biggest challenge for ARNHA was to generate enough revenue through grants and fundraising to cover the almost \$700,000 budget that the Nature Center had been requiring under county management. In addition to the Gala, other events were added, such as Bird and Breakfast. An appeal was made to all ARNHA donors and to the larger community surrounding EYNC. There was an enthusiastic response from all, showing how important this gem was to the region.

Once the transfer was official, staff were needed to continue all of the amazing work of EYNC. Employees who had served under the county in one capacity willingly took on brand new roles to smooth the transition. This was key, because the staff brought with them skills and knowledge to keep the center functioning seamlessly. I began volunteering in December of 2010 and, to an outsider like myself, it felt like this staff were seasoned professionals.



For the transition, Marilee Flannery, who had been the EYNC Executive Director under the county, was chosen by ARNHA to continue in that role. Jamie Washington continued in the position of Volunteer Coordinator. Betty Cooper had served as the communication specialist, which made her the best candidate for Development Coordinator, Denise Booth took on the duties of Office Manager and, as with most good office managers, kept it all together. All four of these amazing women have since retired but stay connected to EYNC, volunteering at events and lending their expertise when needed. Brena Seck became lead Naturalist for the Maidu programs and continues in that position today. Shawna Protze took on aquatic programs and became more involved in animal care. She has since moved on to other endeavors. Steven Wolcott continues in the position of Building and Grounds Maintenance.

Eleven years later, look where we are! EYNC is still the pri-

mary provider of nature and environmental education in the Sacramento area focusing on the Lower American River. The staff has grown from 6 to 15 and has taken on many of the tasks that had been done by the volunteer board. The current budget continues to be between \$700,000 and \$800,000. We now have more than 200 volunteers who bring a variety of skill sets. With the collaborative efforts of the EYNC staff and ARNHA, the center continues to thrive and grow and has become an even more valuable resource during the pandemic. School programs provide invaluable experiences for students from all backgrounds and a vibrant speaker series provides adults with lifelong learning opportunities. Online content has broadened the reach of many programs to people throughout the entire US. Despite the changes, EYNC continues to be an amazing resource in the middle of an urban area, making nature accessible to all.

Joey Johnson is Past President of ARNHA, a photographer and a nature lover. Photos in this article came from past issues of The Acorn.

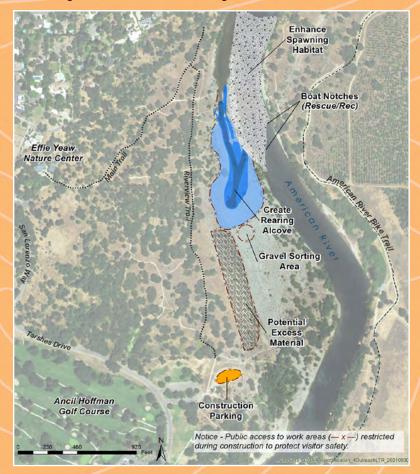


Celebrants pose at the grand reopening of EYNC in September 2010. The group honored the late ARHNA volunteer Jo Glasson Smith, whose family's generous \$60,000 donation in her honor provided essential funding. Left to right: Susie Durant, George Smith, Cindra Smith, ARNHA president Larry Washington, EYNC staff Betty Cooper and Marilee Flannery, and EYNC barn owl resident Luna.

Carol Doersch, one of the movers and shakers who helped the ARNHA board put together their plan for taking over operations of EYNC.



Salmon Habitat Restoration Project to Begin in Late August 2021





After a year's delay, the salmon habitat restoration project planned for the part of the American River in front of the Effie Yeaw Nature Study Area is set to begin at the end of August. It is scheduled to be completed before the end of October and the start of the 2021 salmon run. The project, which is coordinated by the Sacramento Water Forum, will augment and recreate spawning and rearing areas for native Chinook salmon and steelhead trout. Salmon lay their eggs in loose gravel in the flowing river, then cover them up with more gravel of a specific size after they are laid. Spawning beds along the American River have degraded over time through natural processes and years of high river flows.

No new rocks or material will be brought in. The project will involve sorting and redistributing rocks from the existing gravel bar and placing ideal-sized rocks in the river for spawning. A deep alcove will be dug parallel to the river to fill with water and create a safe space for young fish to grow. Willows and other riparian vegetation will be planted to provide shelter and habitat for the little fish and the insects and plants they feed on.

This project will cause some disruption including large machines, noise, and dust. Some areas will be off limits to visitors. However, construction will only take about two months, and the expectation is that improved habitat may yield an increase in spawning as soon as this year. Find out more about the project by visiting the Water Forum web site at waterfo-rum.org/AH. Effie Yeaw Nature Center will be sponsoring educational tours of the site and posting signage so you can learn more about the project and the biology of these amazing fish. Come visit!



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- Bill Davis in honor of David & Maxine Clark
- Jalen Davis
- Katharine Davis
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- Jennifer Diehl & Sabrina Tepper
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 in memory of
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- Alana Dieter
- Darryl DiSano
- Rebecca Doane in honor of Teresa Lyday-Selby's birthday
- Dora Dodson
- Ann Doersch &
- Stephanie Monzon

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- Pat & William Dorman
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- Krystin & David Dozier
- Linda Drawbert
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- Tony Fletcher
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- LeAnn Fong-Batkin
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