



Sustainable Living in the Land of the Golden Bear

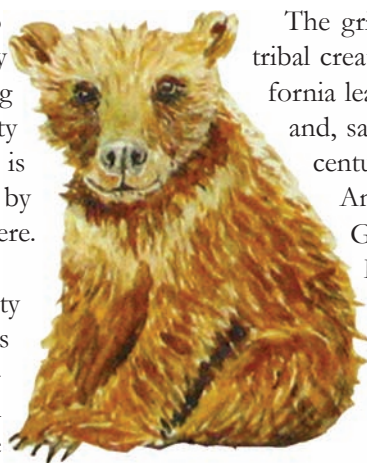
story and drawings by William E. Avery, Ph.D.

Sacramento, the self-proclaimed Farm to Fork capital of America, promotes healthy farming practices, eating locally, and working toward a sustainable lifestyle. Sustainability is a modern goal that is as important as it is elusive, but it was actually achieved long ago by the Native Americans who originally lived here. Can we still learn anything from them?

Let's peel back the layers of modern society and go back to that more sustainable time. As we go back in time, we see suburbia shrinking, cars and highways disappearing, Folsom and Nimbus dams disappearing, concrete bridges gone. The American River now floods during the rainy season and spring snowmelt and then recedes to a trickle during the middle of the summer. The old railroad bridges and foot bridges are the next to go. Sacramento shrinks to isolated forts and temporary camps. Canals disappear and roads relax into old horse trails until the horse trails disappear completely. The Bay Delta ebbs and flows from an inland sea to a seasonal marshland. Wolves and grizzly bears return. Grizzlies are extremely abundant in the Sacramento Valley now. Antelopes too. Vast flocks of ducks and geese and cranes dominate the seasonal marshes. All the introduced species are gone - no more English ivy, roof rats, house sparrows, starlings, striped bass, or Asian clams. Native smelt, perch, salmon, and trout are present in great abundance. Finally, the last bit of European influence is gone.

Now there are no horses, but there are dogs, and there are lots of people—millions in fact—living in distinct tribes throughout what would later become California. On the banks of what will later be called the American River are many villages, and their inhabitants have lived in a balanced relationship with the landscape for many dozens of centuries—for millennia.

It is worth stopping to think, for a moment, how notable that is—for thousands of years—the local Native Americans lived in a balanced relationship with nature, including with the region's top predator the grizzly, or Golden Bear (*Ursus arctos californicus*).



The grizzly was considered a brother species, revered in tribal creation stories, from whom the first humans of California learned much about what to eat and how to survive, and, sadly, whose extinction they witnessed in less than a century at the hands, bayonets, and rifles of European and American settlers. Monarch, the last captive California Grizzly Bear died in 1911—the same year Governor Hiram Johnson signed into the law the first official version of the state bear flag. The last wild grizzly was killed in Tulare County in 1922, and the very last sighting reported was in 1924.

see Bear on page 3

Robust Community Support Makes Art Auction Another Success

by Liz Williamson



The Fifth Annual ARNHA Gala and Art Auction, which took place this year on Saturday, May 31, showed, once again, the strength of support in the community for ARNHA and the Nature Center.

More than 300 arts patrons and ARNHA supporters attended the event, distinguished this year by the increased diversity of the art works shown. Among the most popular items were birds: Chester C. Wilcox's hip-high wood carving of a statuesque Great Blue Heron, Eric Dahlin's clay sculpture of a pair of cheeky Robins, and Molly Keller's watercolor of a playful Crow all drew a great deal of bidder interest and sold well above their stated values. Debbie Gualco's "Sunrise Riverbank" won the Best of Show.

see GALA on page 4

ARNHA Annual Meeting, Wednesday, September 10 at 6 pm

President's Message

Dear ARNHA Members,

In my opinion, there's no better way to experience the change of seasons than spending time at the Effie Yeaw Nature Center. During the past few months, you enjoyed, I hope, spotting the fawns, the ever-busy woodpeckers, and the flocks of wild turkeys. By the way, did you know that young turkeys are called "poults" until they graduate to juveniles and are designated "jakes and jennies" until they reach adulthood as "toms and hens"?

We had a very busy year! Besides delivering 17% more natural science classes to elementary school students, ARNHA graduated its first cohort of UC Naturalists. These adult "citizen scientists" completed 40 hours of training, including field study and a capstone project, and become a trained candidate pool to serve as docents, volunteers, and employees of non-profits, government, and business in the Sacramento region. We're pleased to offer this program again in spring 2015.

It was fun to see many of you at ARNHA's Fifth Annual Painting Where the Wild Things Are in May. You'll be pleased to know that proceeds topped last year's. If you participated in ARNHA's Spring Annual Appeal and contributed to ARNHA via the regional Big Day of Giving, a hearty Thank You to you. Each year, ARNHA is challenged to raise over \$500,000 to fund the operation of the Nature Center, and your generous contributions are most appreciated.

It has been an honor to serve as ARNHA Board President during the past two years. ARNHA is fortunate to have a Board of Directors and Associate Board dedicated to the mission of providing quality natural science education and of fostering environmental stewardship, a hard-working staff, a large group of volunteers generous with their time, and members and donors who believe in and support the mission.

Warmest regards,



Diana Parker, President

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American River Parkway Coalition
Katie Baygell & Peggy Kennedy

ARNHA
American River Natural History Association
P.O. Box 241 ■ Carmichael, CA 95609
916-489-4918 ■ www.arnha.org

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Ask a Naturalist

Q: How can you tell whether a bird in flight is a hawk or a Turkey Vulture?

A: EYNC Associate Naturalist Rachael Cowan: The best way to tell if you have spotted a Turkey Vulture is the hallmark red, featherless head. If lighting prevents this view and you have a head-on view of the bird, try to determine whether the wings are slightly tipped up to form a "V" shape. This wing tilt helps them to optimize lift. You may be able to see the contrast between dark plumage on the body and forward edge feathers with the lighter color of the underside of the primary flight feathers. These lighter primary feathers have particularly long "fingertips." Finally, as Turkey Vultures are looking to hitch a free ride on rising thermals, you may see them teetering in flight with few flaps of the wing compared to raptors.

If you do not find any of these identifying factors of a Turkey Vulture, you may be gazing upon a hawk in flight. Identifying raptors in flight can be very difficult even for the most experienced birder. In the fall, juvenile broad-winged raptors, or buteos, are nearly the same size and shape as adults, but their plumage has not yet developed adult markings.

Bears, continued from page 1

Before all this, the Nisenan Maidu lived in small-footprint villages connected by foot trails. Areas near the villages were burned seasonally to encourage the growth of oaks and bulb-producing plants. The Nisenan lived in sustainable homes formed of willow branches tied together with grape vines and covered with layers of folded tule reeds. Their clothing, tools, hunting equipment, baskets, cooking utensils, and food all came sustainably from nature. Their main staple was acorns. They carefully located their villages away from the densest concentrations of grizzly bears because one of the grizzly's main staples was also acorns.

Great congregations of grizzlies gathered under oaks to eat acorns. The older bears, not so able to climb, relied on the juvenile bears who scrambled up into the trees and shook the branches, relieving them of their bounty.

In a similar style, the Nisenan sent their young climbing into the oaks. Just like the juvenile bears, the youngsters knocked and shook the acorns out of the trees onto skins laid below.

A couple of experienced Nisenan could harvest 75 pounds of acorns an hour! Acorns were dried and stored in granaries made of willow branches and grapevines. Dried acorns were then pounded and ground into meal within holes worn into surface rocks (Indian grinding rocks). The acorn meal was sorted

occasional deer or elk, augmenting that with squirrels and voles, and fishing for salmon, their diet is actually mostly vegetarian. This attribute allowed them to live in greater abundance than what would be expected of a very large top predator. It is ten times more efficient to eat lower on the food chain, to have a largely vegetarian diet, than it is to eat only meat.

In addition to acorns, grizzlies dug for a variety of roots and bulbs, unintentionally leaving the smaller bulbs in place to mature later. They also ate many kinds of grasses, horsetail shoots, various herbaceous plants like clover, many kinds of young leaves, conifer needles, and many kinds of berries.

Using digging sticks, the Nisenan also harvested bulbs of Brodiaea, Camas, and wild onion intentionally replanting the smaller, younger bulbs to create a pattern of sustainable harvest. The bulbs were eaten raw or dried and ground into meal to augment the acorn meal.

Like the grizzlies, the Nisenan seasonally fished for salmon and hunted for deer. They used nets weighted by sinker rocks with holes drilled through them and sometimes, in small streams, stunned fish chemically with juices from the soap plant. They harvested mule deer and, occasionally, elk, for meat, leather, and bones. A system of trade was established with other tribes to acquire materials that couldn't be harvested at home.

The Nisenan Maidu held seasonal festivals of world re-

newal and gratitude. That they were able to share a diet and a landscape with an abundant top predator is a remarkable testament to the sustainability of their lifestyle and their ability to live in balance with nature.

How we can turn our feeling of reverence and inspiration for the Nisenan into something useful for us today is a story for the next time.

In the meantime, before you hear that story, you can think of both them and the California Grizzly, our official state animal, considered to be a symbol of courage, strength, and unyielding resistance! We can be grateful for that precious nature

that still exists inside us and around us and that will be there in the future if we allow ourselves the courage to take action to live sustainably, like the Nisenan did in the land of the Golden Bear.

William Avery is a frequent contributor to The Acorn and is a Professor in the Department of Biological Sciences, CSUS. He recently completed artwork for Field Guide to California Rivers, UC Press, 2012, and Field Guide to Oregon Rivers, OSU Press, 2014. ■



from the husks and whisked back into the mortar holes by hand brushes made from the fibrous root masses of the soap plant. Though grizzlies could eat the acorns raw, human consumption required the acorn meal to be leached in pits or baskets with freshwater run through the meal to remove the toxic and bitter tannins. Finally, the acorn meal was used to make various high-protein breads, cakes, and soups.

Though grizzlies have always been top predators killing the

Gala, continued from page 1

Originally conceived by former ARNHA presidents Carol Doersch and Noah Baygell, the first Gala and Art Auction was held in May 2010. At that time, the County budget was in crisis, and the Nature Center's continuation was in jeopardy. Fundraising was needed desperately.

Since 2010, the Gala has grown substantially, thanks to the talents of hundreds of artists, committee members, staff, and volunteers. Each year, the event has returned increasing proceeds, this year reaching almost \$75,000, a 10 percent increase over the proceeds in 2013. This is the largest single fundraiser for the Nature Center and provides approximately 13 percent of the annual budget.

Thanks to all who contributed to the success of this year's event: Muriel Johnson, the Honorary Chairwoman; David Sobon, the charismatic auctioneer; CBS's Marianne McClary, the emcee; David Peterson of the Sacramento Fine Arts Center, who coordinated the show; Elliot Fouts, who juried the show; the ARNHA Events Committee; the Nature Center staff; and the seventy-five ARNHA volunteers who worked on the event.

Finally, thank you to those who sponsored the event:

Title Sponsors were David and Maxine Clark, in memory of Jack Hiehle.

Underwriter Sponsors were the Morton & Marcine Friedman Foundation; Western Health Advantage; Lou Heinrich; Muriel Johnson, and Spoons Encore.

Patron Sponsors were the Eskaton Foundation; Oakmont of Carmichael; McDonald Plumbing, Heating & Air Conditioning; Inside Publications; sbwdesign; David Sobon Auctions; SMUD; The Sacramento Bee; Raley's Family of Fine Stores; Genovese, Burford & Brothers; the Miles Law Firm; Sierra National Construction; Pat Mahony & Randy Getz; Ted & Melza Barr; Kim Pacini Hauch & Company; Dr. Dennis & Mrs. Nancy Marks; Bronco Wine Company; Sacramento County Regional Parks; Carmichael Chamber of Commerce; Fort Hemenway B&B; Ann & Todd Doersch in memory of Carol Doersch; Aba Daba Rents; and Peggy and Bruce Kennedy.

Liz Williamson is a member of ARNHA's Board of Directors and Chair of its Events Committee. ■

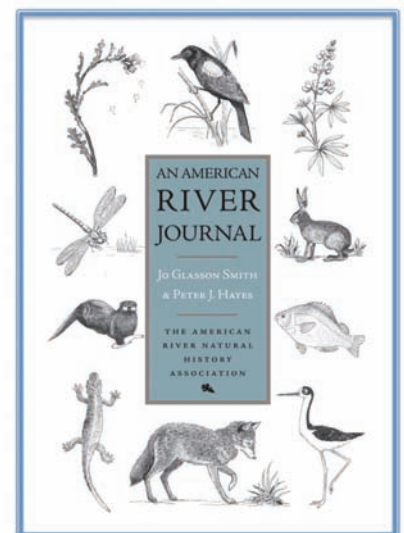


Top Photo: winning bidder Susan Skinner celebrates acquisition of the top-selling painting with artist Debbie Gualco. Photo by James Cooper.

Bottom Photo: left to right, County Supervisor Susan Peters, David Sobon, Janine Bera, Congressman Ami Bera, Marcy Friedman, Mimi Kondos. Photo by Susan Skinner.



An American River Journal



Jo Smith and Peter J. Hayes capture the beauty and peace of a walk along the American River, joining drawings and essays from their observations of nature's rhythms through the seasons.
\$9.75 at the Effie Yeaw Nature Center, arnha.org, and selected bookstores

ARNHA Graduates Its First UC Naturalist Class!

by Margaret Leavitt

On Tuesday, June 10, excitement and celebration filled Effie Yeaw Nature Center. That evening the first American River Natural History Association class of twenty-one participants completed an eight-week training course and became Certified Naturalists through the University of California Naturalist Certificate Program.

According to EYNC Associate Naturalist Mary Jane Boxer, Program Coordinator for the class, ARNHA is the first Central Valley organization to partner with the UC Program. Although coastal and Sierra organizations have previously offered the course, ARNHA is also the first organization in California to offer the certification course on-site, with curricula and field trips tailored to the local area.

The mission of the California Naturalist Program is "... to foster a diverse community of naturalists and promote stewardship of California's natural resources through education and service." The Certificate Program offers participants an overview of California ecology using a core curriculum of UC-developed written and visual materials. The class addressed a different topic each week, including plants, geology, water resources, wildlife, fish, resources interpretation, and energy.

John Spranza, a biologist with Dudek Consultants, was the Lead Instructor for the course. Every class featured a guest speaker as well, including EYNC's Marilee Flannery, who addressed interpretation and citizen science; Glenn Jacks, Professor of Geology at American River College; Chris Fitzer, a fisheries biologist from ESA Consultants; botanist Laura Burris; restoration ecologist Zarah Wyly from Sacramento Tree Foundation; herpetologist

Sam Bacchini; bat expert Dan Neal; and Brett Corbin, an energy specialist from SMUD.

But there was much more to this fast-paced, intensive program than books and lectures. Since the classes were held at EYNC, the participants could learn about the local environment right outside the classroom. Classes were held every Tuesday evening from 5 to 9, and included a hike at EYNC to explore the evening's topic. There was also a Saturday field trip to Cosumnes River Preserve.

A highlight of the program was the Capstone Project completed by each participant individually or with a small group. Each Capstone Project was a service project completed in a partnership with an environmental organization, such as EYNC, to foster education about and interpretation of the natural world.

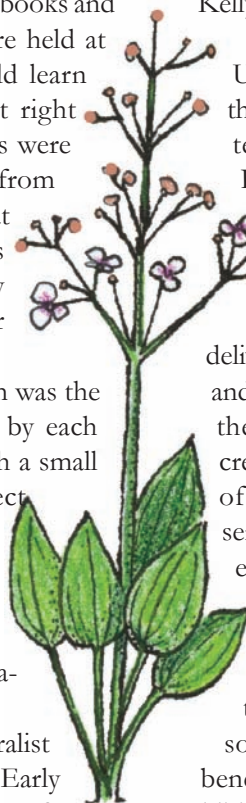
For example, EYNC Naturalist Rachael Cowan developed an Early Childhood Education program for EYNC, targeting pre-kindergartners. Other Capstone Projects included designing a habitat restoration plan for the oak and other trees adjacent to the EYNC Maidu Village; revamping the current EYNC trail map; surveying the native plants along the American River; and monitoring how changes in American River flows impact shoreline habitat.

In addition to Boxer, EYNC Naturalists Melanie DuBoce and Rachael Cowan earned their certificates, as did EYNC Volunteer Docents Margaret Rogers, Kelly Cohen and Michael Kwong.

The completion of a successful UC Naturalist Certification class through ARNHA has been a long-term goal for ARNHA Board President Diana Parker, who noted that, "Participating in the UC Naturalist Program allows ARNHA to meet its mission of delivering natural science education and environmental stewardship of the American River Parkway by creating a trained candidate pool of "citizen scientists" who can serve as docents, volunteers, and employees at regional non-profits, governments, and businesses.

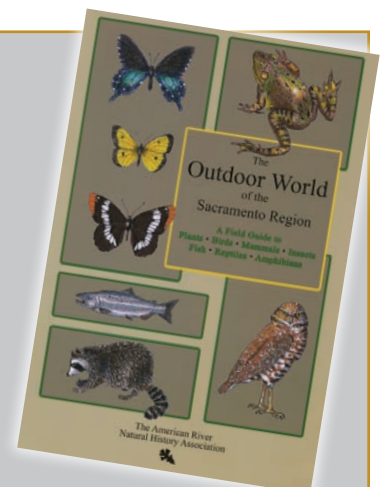
"Through the program, ARNHA strengthens its relationships in the community by soliciting capstone projects that benefit the Sacramento region. In addition, through the engagement of guest lecturers from local universities and federal and state agencies, ARNHA continues to increase participation in the scientific research and monitoring conducted by university students in the Parkway."

Margaret Leavitt is a docent-in-training, volunteer receptionist at EYNC, and member of ARNHA's Media/Publications Committee. ■



The Sandhill Crane finds the Central Valley a great place to spend the winter

The first all-color edition of
The Outdoor World of the Sacramento Region
with 550 illustrated species
is available at the Discovery Shop
inside the Effie Yeaw Nature Center,
and selected local bookstores,
for \$16.95.
or online at www.arnha.org



Jack Hiehle, "Living Textbook"

by Peter Hayes

"His knowledge of flora and fauna was encyclopedic," ARNHA Associate Board member Bud Getty said of his State Parks Department colleague Jack Hiehle, who died February 23 at the age of 93. The accolade for the environmental champion was heard frequently in interviews with those who attended a memorial service for Jack at the Effie Yeaw Nature Center May 17. The service also honored Jack's wife of 63 years, Zilpha, who died last fall.

"We had to go to Jack when we needed some information," Bud recalled. "We'd mention seeing tules in some spot at the other end of the state, and he'd tell us, 'No, those were cattails.'"

Another State Parks retiree, Jim Trumbly, said Jack was a "living textbook" who knew everything about wildlife, their behavior, what they were eating.

"Once we were together at Crystal Cove State Park on the Orange County coast," he said. "Jack was down in a gully, and all of a sudden he let out this shrieking cry. He said he was imitating a wounded rabbit in an effort to bring in a predator like a coyote or mountain lion. I really laughed."

Jerry Towner, a Chevron Petroleum employee, said he accompanied Jack on his last birding trip, to Sailor Bar on the American River Parkway and on his last Sierra birding and wildflower trip, to Lake Winnemucca.

"He was a great botanist and also a teacher," Jerry said. "He would identify a wildflower, and a little while later when we saw it again he would ask us jokingly if we could i.d. it."

No question, Jack lived to be outdoors around the plants and animals he loved and protected, said Bruce Kennedy, another ARNHA Associate Board member who worked with him. "Sitting behind a desk in an office was a chore he did begrudgingly in order to serve the larger purpose," Bruce said.

Warren Truitt, former president of the Save the American River Association, recognized the thou-

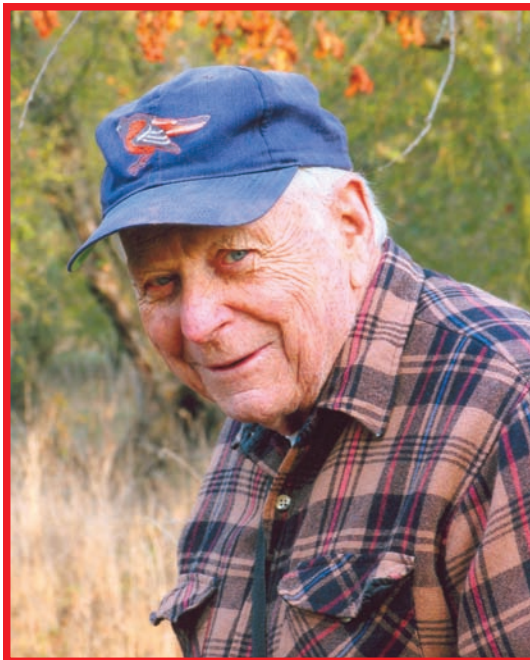
sands of hours that Jack volunteered for habitat enhancement at Effie Yeaw Nature Center by preserving oak trees and removing non-native plants like Spanish Broom. "He has given so much to the Nature Center; he'll be remembered along with people like Jo Smith and Carol Doersch. His work has been a gift to the community."

Jack's son, Torgen, told how his mother and Jack were linked together for 63 years. "In the 1940s they started skiing together, and their interests paralleled each other ever since. She was always there."

Zilpha was prominent in local theater circles, once playing the lead in "The King and I" in a Sacramento State University production. Marilee Flannery, former EYNC executive director and current exhibits coordinator, recalled the time Zilpha, dressed and portrayed as Effie Yeaw, made a presentation to the Sacramento County Board of Supervisors.

Peter Hayes is co-chair of ARNHA's Media/Publications Committee. A career journalist, he is author of The American River Almanac and An American River Journal and editor of several ARNHA publications. In 2009, he was named county parks Outstanding Volunteer by the Board of Supervisors. ■

Photo by Linda Thomas



Save the Date! NatureFest 2014

Sunday, October 5 - 10am to 3pm
Effie Yeaw Nature Center's
Largest Annual Community Event

The first Sunday in October each year is a big day in the beautiful American River Parkway at Effie Yeaw Nature Center. On October 5, NatureFest 2014 will be staged as another great family fun day, especially for families of school age children, Boy Scouts, Girl Scouts, and other youth organizations.

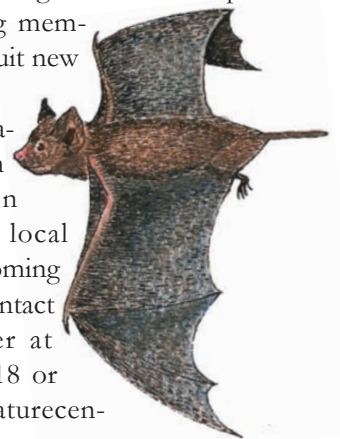
The event promotes awareness of local natural resources, environmental education and stewardship opportunities, regional science centers, and safe and healthful recreation. Hands-on activities, demonstrations, exhibits, and live animal presentations encourage participatory learning. Exhibitors represent natural resource, natural history, and healthful outdoor recreation organizations.

NatureFest 2012 was the winner of the Sacramento Environmental Commission's Environmental Recognition Award for successful environmental education/outreach program.

Local organizations see many benefits from participation at Nature Fest.

Based on last year's attendance, this year's event will attract over 1,300 visitors. It is an excellent opportunity for local organizations to interact with our community, strengthen relationships with existing members, and recruit new members.

Your organization can participate in this exciting local event by becoming a sponsor. Contact Betty Cooper at (916) 489-4918 or bettyc@sacnaturecenter.net ■



The Brazilian free-tailed bat only measures four inches with an eight-inch wingspan.

Fiddler in the Field

There's a song in the air these balmy evenings, the bright sound of a cricket carrying over the dull roar of nearby auto traffic. From somewhere amid the shrubbery, this nocturnal minstrel serenades, heard but not seen. It's the most musical of nature's violinists, insects that produce their song by scraping the edge of one wing across the other. It's the male that does that. The female is silent, but listens through an ear located on her foreleg. To her it must sound very good. Soon, she will be laying eggs underground, to hatch next spring.

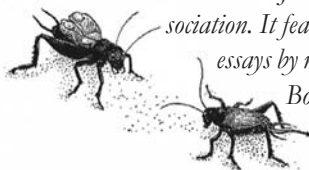
When it comes to eating, the cricket never met an animal or vegetable it didn't like. Slender antennae that are longer than its blackish, brownish grasshopper-like body help it find grasses, grains, and dead insects, and even, alas, woolen articles and book bindings.

It gets around, too. The word cricket is of French origin and means little creaker. In Malaysia, the cricket is believed to be the assumed form of the spirit of the dead. In China, cricket fighting is a popular sport, and in Japan the cricket is kept in a cage as a pet.

But we would rather look upon a cricket as a harbinger of good cheer as Charles Dickens did in his classic tribute to "The Cricket on the Hearth." He concludes, "I have loved it for the many times I have heard it and the many thoughts its harmless music have given me."



From An American River Journal, published by the American River Natural History Association. It features drawings by ARNHA co-founder Jo Glasson Smith and essays by retired newspaper editor Peter J. Hayes, an ARNHA Associate Board member. The book is available for \$9.75 at the Effie Yeaw Nature Center, arnha.org and selected stores. Visit arnha.org "Podcasts," to hear readings of the essays by the author.



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Jackie DeLu

Kiwanis Volunteer of the Year

There are volunteers and there are volunteers. And then there's Jackie DeLu, Effie Yeaw Nature Center Docent/Naturalist who on June 27 was honored by the Carmichael Kiwanis Club as its Volunteer of the Year.

Jackie began volunteering at the nature center in 2006 and since then has volunteered more than 1,000 hours, leading about 400 tours, and teaching 6,000 youngsters about nature.

Her tours impart a respect for nature, understanding life cycles, elements of a successful habitat, energy cycles in nature, eco-systems, and the natural history of local snakes and raptors.

"It's rewarding for me to take children on walks in the forest to help them enjoy all the things they can do," Jackie said. "Sometimes they're apprehensive at first

but get excited when they discover the deer, the butterflies, and other animals. I especially remember the time we saw a deer and a coyote standing eyeball-to-eyeball about 15 feet apart until the coyote ran off."

EYNC Volunteer Coordinator Jamie Washington says that in the past year Jackie began organizing and leading meetings to help docents to become more empowered and, through sharing experiences, become better docents. She also has served on education committees to match EYNC tour goals and objectives with state science standards.

"Her leadership and her passion are an inspiration to us all!" Jamie said.

Jackie also is a Board member of the American River Natural History Association, the non-profit organization that operates and funds the Nature Center.

The Carmichael Kiwanis Club is a staunch supporter of EYNC, providing fi-

nancial support and a pancake breakfast for the spring Bird and Breakfast family day.



Kiwanis member George White presents Jackie the Volunteer of the Year for 2014 plaque. Photo by Kari Bauer. ■

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- Barbara Lezon
- Marya Liberty & Robert Dunn
- Laurie Litman
- Marsha Littrell
- Louise & James Lockhart
- Sandra Lockwood
- Alice Lonscak-Mauliffe
- Michele Long
- Bev Lorens
- Renata Losberg
- Michele Lozano
- Mark & Jennifer MacDonald
- John Mangels
- Jean Marcy
- Marty Maskall
- Joan Matsler
- Sarah Mattson
- Martha McCorkell
- Anne McDonald
- Rosemary Mayfield
- Linda Melching
- Mary Beth Metcalf
- Margaret Mette
- Beryl Michaels
- Joyce Mihanovich
- Glenn Miles
- Susan Miller
- Patrick Moffett
- Barbara Mohr
- Don Mongeau
- Larry Morris
- Deborah Moskovitz
- John & Marsie Mott
- Janet Moulds
- Emily Moulton
- Smokey Murphy
- Polly Murphy Jones
- Judith Murray
- Paula Newcomb
- Susie Niemann
- Ellen & Lou Nishimura
in memory of Jack Hiehle
- Robert and Rebecca Norris
- Pat Nuezel
- Heidi Nurse
- Janet Olson
- Mitchell Ostwald
- Michael O'Sullivan
- Walt Packard

- Leslie Palmer
- Diana & Thomas Parker
in honor of Margery Nicolson
- Jill Pease
- Robin Pepper & Laurie Grenz
- Scott Peters
- Lynne Pinkerton
- Shirley Poirier
- Richard Price & Nancy Reid
- Robin Primavera
- Sabina & Werner Raab
- Narashimhachari Raghavan
- Raley's Scrip Program
- Diane Ramsey
- Timothy Reardon
- Marge Reid
- Fiona Renton
- Sallie Reynolds

- Patty Richardson
in memory of Stroube Richardson
- Anne Rogers
- David Rolloff
- Vivan Russell
- Susan Russell
- SaveMart Supermarkets
- Sam & Mary Ellen Scarlett
- Lynn Schweissinger
- Dr. Daniel Schweissinger
- Julie & John Serences
- Lanna Seuret
- Laverne Shell
- Cathy Shinnamon
- Frank Slachman
- Joan Slachman
- Cindy Smith
- David Sobon
- Susan Solarz

- Jo Souvignier
- William Spaller
- Roberta Sparkman
- St. Mel Parish
- Starbucks Foundation
- Karen Steentofte
- Morna Stephens
- Patricia Symkowick
- Dawn Takamoto
- Daniel & Janet Tankersley
- Edith Taylor
- Janet Tebbel
- Paul Tebbel
- Linda Thomas
- Warren Truitt Jr.
- Del & Alta Tura
- United Way
- Diana Wallace
- Cheryl & Thomas Ward

- Jamie & Larry Washington
- A J Watson
- Betsy & Fred Weiland
- Sally Weinland
- Laurie Weir
- John & Nancy Westlund
- Nancy & William Whitaker
- Aimee White
- Barbara & Ken Wiesner
- Charlie Willard
in memory of Janet Baker
- BE Williamson
- Liz Williamson
- Zarah Wylly
- Harold & Suzanne Yackey
in memory of Jack Hiehle
- Linda Yassinger
- Ruth Younger
- Trudy Ziebell

*Thank
you!*

CSUS Students Survey EYNC Nature Study Area

by Connie Wade

On May 9, seventeen students from California State University, Sacramento, Field Methods Class directed by Dr. Cathy Ishikawa conducted a sampling survey (pilot inventory) of the EYNC Nature Study Area (NSA).

Dr. Ishikawa wanted her students to participate in a “real world” field study as their Final Field Methods Class Project. The American River Parkway Plan requires a management plan for the designated Nature Study Areas within the Parkway. The survey was a win-win for all involved

“Something that struck me, both in the data and being out there, is the high variability--in tree density, coarse woody debris, canopy cover and under-story vegetation,” commented Dr. Cathy Ishikawa.

The ARNHA Resource Maintenance and Monitoring Committee (RMMC) must now review, analyze, and incorporate the data results from the sampling survey.

We look forward to a long and mutually beneficial relationship with CSUS.

Connie Wade is Chair of the Nature Study Area Resource Maintenance and Monitoring Committee and a member of the ARNHA Associate Board. ■

Right: CSUS students from Dr. Cathy Ishikawa Field Methods Class measure an EYNC native oak. From left to right are Nelson Mmbado and Tushaun Vang.

Below: (left to right), Al Habacon, Ezekiel Villacamos, and Heather Wood take the measurements on a large oak tree.



Ex-cop Tracks EYNC Rattlesnakes

By Peter Hayes

Anyone taking an early morning walk along an Effie Yeaw Nature Center trail this summer might well have encountered Mike Cardwell pointing his two-foot long radio direction-finding antenna at nearby grasslands. And a visitor's question would very likely have drawn from him a short course on the life and times of the Nature Center's resident rattlesnakes.

After retiring in 2004 as Chief of Specialized Operations for the San Bernardino County Sheriff's Department, ending a 32-year career in law enforcement, Mike today is an adjunct professor in the Sacramento State University Department of Biological Sciences. And with a lifetime passion for wildlife, especially venomous snakes, he has begun a long-term telemetry study of the home range, seasonal movement, and winter denning habits of rattlesnakes at the nature center.

The affable, 62-year-old Sacramentan says he is especially interested "in how their behavior brings them into contact with humans, thus producing opportunities for snakebites."

"EYNC staff members routinely capture and move snakes away from the Maidu Village and visitor center. Research and monitoring can help the staff understand when or where snakes produce young and where they spend the winter. The staff is thus better able to educate the public on the risks and benefits of living around rattlesnakes."

Once a snake is captured, Mike measures it, determines its gender, and marks a tail segment with an identifying color before releasing it in the preserve. By mid-summer, he said, four males and one female, the latter discovered by his wife Denise, had been implanted with miniature radio transmitters that allow him, after their release, to calculate their body temperature and locate and track them

with the direction-finding antenna.

EYNC Executive Director Paul Tebbel welcomes Mike's rattlesnake research. He says, "It helps the staff better understand the property, know more about rattlesnakes by tracking them. And his study helps our relationship with Sacramento State."

Mike says his interest in snakes began when he was 7 or 8 years old living in Los Angeles. "My mother's cat brought a juvenile king snake into the house. I was fascinated by it and amazed that my parents were not fascinated by it."

The incident nurtured a love of wildlife, especially creatures that he says others unreasonably fear. He has traveled to Central and South America, Africa, and Australia, as well as all over North America in search of such animals as venomous snakes, dangerous spiders, and great white sharks. His long-term telemetry study of wild Mojave rattle-

snakes was featured in Animal Planet's "Venom ER" television series. He has authored and co-authored many papers for scientific and medical journals. He holds a BS degree (*cum laude*) in biology and an MS degree in ecology, evolution, and conservation from Sacramento State University.

With this background, it's safe to say Mike knows something about rattlesnake bites.

"There are an estimated 8,000 venomous snakebites in the U.S. annually, with fewer than one-tenth of one percent of them fatal," he says.

"Relatively few women suffer rattlesnake bites. The overwhelming number of victims are males, especially if they've been drinking. They want to mess with the snake, make it strike or rattle.

"If people would use their heads and walk away from a rattlesnake, nobody gets hurt." ■



Photo by Kari Bauer

Cardwell releases EYNC's first tagged female rattlesnake in remote area of EYNC.

Welcome New Members! April-June 2014

- Beverly Abbott
- Carol & Jay Abbott
- Lisa Acevedo
- Dorothy Alden
- Robin Aldwinckle
- Brittney Alling
- McKee Allison
- Ronald Alvarado
- John Andrews
- Catherine & Wesley Apker
- Audy & Mary Ann Bell
- Karen Benson
- Jon & Robin Berkley
- Nancy & William Bittner
- Shannon Boss
- Diane & Ernest Bouillon
- Abi Bristow
- Michael Britton
- Karen Brookhyser
- Cathryn Browning
- Edward & Lisa Bubienko
- Jonathan Changus
- Angela Chindgren
- Linda Conklin
- Barbara Copeland
- Bethel & Anthony Cullen
- Leota & Thomas Curtis
- Gayle & Daniel Dameron
- Christine Deaner
- Tessa D'Oliviera-Cruz
- Dennis & Pamela Dudzik
- Gary Dusky
- Arlynn Dwyer
- Jessica Eselius
- Estelle Fay
- Michelle Fetros
- Martin Harley Floegel
- Natalie Flores
- Christina Flynn
- Patsy Fortier
- Jean-Noel Gallardo
- Sharon Garrett & Kelly Pantis
- Mario Giacomotto
- Matt Gibbs
- Shira & Donald Gilbert
- Peggy Green
- Brenda Grueneberger
- Eugene & Dorothy Gualco
- Artem Hanawalt
- Heather Harris
- Greta Henderickson
- Madelaine Hendricks
- George H. Hollidge
- Susan Holm
- Jennifer Hughes
- William Ing
- Ya-yin Isle
- Barbara & Gordon Jack
- Nelofer Jamall
- Philip Jordan
- Michael Kalmanson
- Brandon Kapeller
- The Katnik-Santarosa Family
- James & Simon Keehn
- Paul Kinsella
- Victoria Kopitske
- Glen Kuehne
- Karon Larson
- Jean & Ted Lawson
- Jeffrey Lieb
- Therese D. Lowrey
- Thanh Ly & Wendy Knapp
- Janice & Mark Mar
- Denise Martinson
- Ashley Mashburn
- Carey Mastain
- Danielle McCarthy
- Peter & Whitney McIntosh
- Jodie Mexas
- Blunk Microsystems, LLC
- Lesli Millard
- Dawn Miller
- Wendy Miller
- Laura Monahan
- Margaret & Curtis Moulton
- Lillian Nelson
- Robert & Rebecca Norris
- Gregg Nulton
- George Nyberg
- Cynthia O'Connell
- Timothy O'Massey
- Tawni Parr
- Debbie Payant Family
- Shannon Peach
- Chantel Perez
- Ivo Petricevic
- Beth Post
- Melanie & Michael Powers
- Aaron & Alyssa Prohovsky
- Mary Radford
- Ramona Robison
- Mark Roese
- Garrett Schlegel
- Rosemary Seck
- Maggie Smith
- Eric Smith
- Felix & Elizabeth Smith
- Kelly Sorenson
- Becky Sparks
- Sam & Susan Stern
- Ellen Stillman
- Elizabeth Strauss
- Sarah & Gregory Herrera Stoltz
- Rebecca Stone
- Sojeong Stoutamore
- John Sullivan
- Laquita Joy Elder Sweet
- Melissa & Doug Tyler
- Robert Velazquez
- The Waldmire Family
- Tom Weborg & Sandra Singer
- Pamela Whitmarsh
- Lucinda Woodford
- Rick & Dale Worsley
- Harold & Suzanne Yackey
- Lindsey Zacharias

JOIN THE GREAT AMERICAN RIVER CLEAN UP

Remove trash and debris from the banks of the American River by participating in the Great American River Clean Up on Saturday, September 20, 2014, from 9:00 am to 12:00 noon. Last year, over 1,300 volunteers collected 15,000 pounds of trash from sites along the American River. One of those sites is at Ancil Hoffman Park. If you would like to volunteer this September, contact the event's sponsor, the American River Parkway Foundation at (916) 486-2773, or send an email to volunteer@arpf.org. Removing trash and debris prevents pollutants from entering the watershed, harming wildlife, or creating hazards for recreational users. You really can make a difference!

American River Natural History Association
P.O. Box 241
Carmichael, CA 95609-0241
(916) 489-4918 • www.arnha.org
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ARNHA Calendar of Events

- **ARNHA Annual Meeting**
Wednesday, September 10, 6:00 pm to dusk
Effie Yeaw Nature Center
- **Great American River Clean Up (GARCU)**
Saturday, September 20, 9 am to noon
Ancil Hoffman Park (see story page 11)
- **NatureFest**
Sunday, October 5, 10 am to 3 pm
Effie Yeaw Nature Center (see story page 6)
- **Weekend Events at Effie Yeaw Nature Center**
Every Saturday at 10:30 am
Every Sunday at 1:30 pm
See SacNatureCenter.net for more information

Summer Day Camps

by Margaret Leavitt

Summertime, children, and the Great Outdoors—what could be a better combination? All three came together this summer at Effie Yeaw Nature Center's Under the Oaks Kids Camps. In one- and two-week day camp sessions held between June 16 and August 1, two hundred children ages 6 to 11 had the chance to “unplug” and get out in nature, get up-close-and-personal with local critters, have outdoor adventures, meet new friends, and learn more about the American River Parkway that is our backyard.

Younger campers, ages 6 to 8, explored the world of water and the plants and animals that live near it. A field trip to William Pond Park gave campers a chance to pan for gold. No one got rich, but they did discover mysterious “fairy jewels,” along with aquatic creatures. Another week featured “Nature Nuts,” during which campers gently “vacuumed” bugs off plants around the nature preserve and

examined them up close before releasing them unharmed.

Children ages 8 to 11 had the option of participating in the ever-popular two-week “Outdoor Adventures” camp, which involved experiencing the American River in a variety of ways: hiking, fishing, games, a night hike, and river rafting.

Another popular camp for older campers was the “Animal Caretakers” camp, which offered campers the chance to discover the various ways people care for animals, professionally and as volunteers. Other camps featured included Nature Detectives and Natural Talent, a nature-related art camp.

Summer camps were led by EYNC Naturalists Brena Seck, Melanie DuBoce, and Rachael Cowan, assisted by EYNC volunteers. EYNC holds childrens' nature camps during school holidays and in the summer. Camps always fill quickly, so watch for information in *The Acorn* or on the EYNC website, www.sacnaturcenter.net. ■



Photo by Bob McCleary



Photo by Kari Bauer