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for Students

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## ■ Our New Look

Did you notice our sleek new Bulletin design? It's part of ACR's updated branding and communications plan, designed to expand our visibility and the impact we make in our communities.

Find out more on our blog:  
[www.ow.ly/ROpe5](http://www.ow.ly/ROpe5)

Shields Marsh near the McLaren restoration project, facing Tomales Bay, see page 3







## Insights from the ED

### ACR Acts on Climate Change

ACR has a 53-year history of leadership in regional conservation and a commitment to **Conservation in Action**. This includes our efforts to address the major impacts that are expected from climate change over the coming decades—higher-than-average temperatures, an increase in the severity of storms and drought, sea level rise and a changing ecological landscape.

With our increasing attention to these impacts and our leadership role in building community awareness of regional conservation concerns, ACR is well positioned to make key contributions that can promote the broad cultural change needed to reduce carbon emissions.

ACR believes that we all need to be part of the solution and works both singularly as an organization and collaboratively with other agencies toward our common goal.

ACR's climate change goals are to:

- Increase ecosystem diversity and climate resilience
- Educate community members of all ages
- Model responsible, climate-smart land use practices
- Instill an appreciation of the natural world, including its sensitivity to climate change and its dependence on conservation action
- Promote an awareness of climate impacts on local ecosystems and human environments

- Study the effects of climate change on our local ecosystems and make science-based recommendations for appropriate conservation action

Following its mission, ACR meets these goals by:

**Protecting valuable habitats.** We own and manage over 5,000 acres of diverse habitats in Marin, Sonoma and Lake counties.

**Studying the effects of climate change.** We investigate the responses of key species to the effects of climate change.

**Demonstrating stewardship both on and off our properties.** We remove invasive plants and animals and implement restoration projects using both our trained staff and our cadre of stewardship volunteers.

**Educating the community, so that everyone can be a part of the solution.** We teach a wide range of community members through our extensive education programs.

**Demonstrating responsible land use.** We model actions that will help to reduce the causes and effects of climate change.

Climate change is the most significant environmental issue that impacts both natural and human communities. We invite you to join us in pulling together to find solutions that will sustain future generations and the rich diversity of life on earth. ■



*John Petersen,  
Executive Director*

## Restoration Along Tomales Bay

### Part 2 of 2

Along the beautiful Inverness shoreline, near the point where broad tidal marshes meet the open waters of southern Tomales Bay, ACR is finishing work on a rare opportunity—giving back to nature a previously developed portion of the landscape.

Through a generous donation by ACR benefactor Helen McLaren, we are protecting and restoring a parcel of land near the mouth of Papermill Slough. Here, the daily tides interact with runoff from Inverness Ridge through a system of transitional brackish and tidal marshes.

The project also improves conditions for the adaptive, landward movement of the bay's tidal wetlands as future sea levels rise. See a detailed description of the restoration in the spring 2015 Bulletin: [www.egret.org/bulletin-acrs-newsletter](http://www.egret.org/bulletin-acrs-newsletter).

Less than a year after the restoration work began, all buildings and other signs of human development have been removed. ACR also removed dozens of mature, nonnative trees (mostly acacia), along with masses of nonnative holly, English ivy and wisteria.

Numerous patches of other invasive weeds have also been removed and this effort will continue through summer. In fall and winter, we will complete the native revegetation phase to reestablish a canopy of red alders, an understory of native shrubs and thickets of arroyo willows. Locally gathered seeds will be harrowed into the soil and mulched to facilitate the recovery of native ground cover.

Already, the site has been dramatically transformed—it feels natural again—and it is nearly ready for natural processes to guide the rest of the recovery. ■



*John Kelly,  
Director of  
Conservation  
Science*



**Restored tidal marsh along Tomales Bay**





## Juniper: Exciting Hands-on Science for Students

Juniper, ACR's Junior Naturalist Program, is an in-depth nature education program for 5<sup>th</sup> through 12<sup>th</sup> graders at the Bouverie Preserve. It begins in the spring with five Saturday sessions, and continues with ongoing learning opportunities for graduates. Many students stay involved at the Bouverie Preserve well past their graduation from the program.

Junipers also help docents lead the public on nature walks, expressing ACR's commitment to



Juniper interns at the Bouverie Preserve

cross-generational education.

### Deepening their involvement

Every summer a select few Junipers are invited to serve as summer interns, a program generously funded by Keysight Technologies.

"The summer interns support the Bouverie resident biologist by conducting field research, preparing scientific specimens, entering data from the newt count and other field studies," says Director of Stewardship Jeanne Wirka.

ACR was pleased to grant the 2015 David Bouverie Scholarship to Jared Abramson, a graduating senior at Montgomery High School. Jared will attend UC Santa Barbara in the fall.

"They also support the resource ecologist in such resource management projects as irrigating restoration sites and controlling invasive species. The main goal, however, is to provide them with direct mentoring by ACR science staff."

### A word from our 2015 summer interns

Incoming Windsor High School seniors Katy and Sara Tracy had this to say about their recent experience as the Juniper summer interns:

"The Bouverie Preserve is known as a hub for nature education, a place where students learn about nature and science. But the Bouverie is so much more to us. It's a place where we can be ourselves, where we can be excited about spiders and fungus, and really just love science. Bouverie Preserve is like our family...we have friends here and support from the staff and docents. We get to learn, to laugh and to have fun here.

"We have had so many amazing opportunities, such as interning for (Director of Stewardship) Jeanne Wirka. We get to really see what it is like to be a biologist.

"The hands-on experience we received, working with data and other projects, will help us as incoming seniors. It will also be beneficial for college applications and future jobs, and has opened our eyes to a life in science.

"These experiences would have never occurred without the Juniper program. We became Junipers in 2009 and since then have been able to take part in exciting and educational activities." ■

## Technology Connects Us to Nature

iNaturalist is a worldwide online social network where people share biodiversity information to help each other learn about nature.

As a science tool, it helps us document the biodiversity on ACR Preserves. It supports education by connecting people to nature. For example, I recently hit the trail with my iPad to upload observations to the Bouverie Bioblitz project.



Jeanne Wirka,  
Director of  
Stewardship

I encountered Docent Beverly Diplock and Strawberry School students she had just gotten

excited about oak trees. One boy grabbed my arm and said, "Let's record the Coast Live Oak!" Then the children wanted to document the California bay tree and the turret spider and more.

I realized the iPad was not a screen between students and nature. Rather, it became a window through which they saw themselves as scientists. ■



Bouverie Docent Laura Blatt and Juniper Sara Tracy use current technology in the field

Photo by Ren Berchin

## Grazing Returns to the Grasslands

California grasslands are among the most altered ecosystems anywhere. It is common to find 90% of them covered in plant species that humans have imported over the centuries. Yet, they're a hotspot of diversity and awe-inspiring beauty with native wildflowers and deep-rooted bunch grasses coexisting with newer neighbors.

This presents unique responsibilities and challenges for ACR in managing these special places.

### Grazing cattle help preserve diversity

The preserve manager has few tools to reduce fast-growing, introduced annual grasses while allowing for native wildflower diversity.



The grazing of domestic cattle, when done carefully, can do just that.

When the Mayacamas Mountains Sanctuary near Healdsburg came to ACR, it had not been grazed in over a decade. That contributed to a heavy buildup of thatch from introduced annual grasses.



Hildebrand Family

The Hildebrand family, longtime local ranchers, had worked closely with ACR benefactors Jim and Shirley Modini on the neighboring, now-ACR-held preserve. The Hildebrands carry a deep knowledge of the property and respect for conservation values. They were eager to partner with ACR to reintroduce light seasonal grazing to the Mayacamas Mountains Sanctuary (now part of ACR's Modini Mayacamas Preserves).

ACR science staff is pleased to include grazing as part of our grassland stewardship. The Hildebrands will reintroduce cattle grazing to these scenic grasslands this winter. ■



Sherry Adams,  
Biologist &  
Preserve  
Manager, Modini  
Mayacamas  
Preserves



## SIGNATURE EVENT

### Bouverie Preserve

 Annual ACR Appreciation Picnic

**Save the date!**

**Sunday ~ March 13, 2016**

ACR invites you—volunteers, members (Sponsor-level+) and donors (\$250+ annual gift)—for a springtime afternoon at the Bouverie Preserve so we can **thank you** for your support of ACR programs and preserves.

*By invitation only*

Not a Sponsor-level member or supporter? Visit [www.egret.org](http://www.egret.org) to make a donation today!

### Bouverie Preserve

 Guided Nature Walks

**Saturdays ~ September 26, October 10, October 24, November 14, 2015**

**Saturdays ~ January 30, February 27, March 12, March 26, April 16, April 30, May 7, 2016**

**9:30 a.m. – 1:30 p.m.**

Experience the beauty and rich natural history of this 500-acre preserve.

*Reservations required: [rsvp@egret.org](mailto:rsvp@egret.org) or 415.868.9244 ext. 110*

  Twilight Hikes

**Friday ~ September 11, 2015: 4:00 p.m. – 7:00 p.m.**

**Friday ~ September 25, 2015: 4:00 p.m. – 7:00 p.m.**

**Friday ~ October 9, 2015: 4:00 p.m. – 7:00 p.m.**

Looking for an evening of adventure this fall? Here are three reasons you should join us for a Twilight Hike at the Bouverie Preserve:

1) Observe the wildlife that becomes active as the sun goes down, 2) Make stops along the way to take in the views, 3) Learn about the fascinating history & ecology of the Bouverie Preserve

An easy, enjoyable outing, the Twilight Hike features the natural world as it settles into evening. Some portions of the trail require hiking uphill and downhill, but would not be considered too steep for most hikers. Bring water, jacket, good walking shoes and a flashlight.

*RSVP to [rsvp@egret.org](mailto:rsvp@egret.org) or 415.868.9244 ext. 110, space limited*

### Martin Griffin Preserve

**Volunteer Canyon**

 Ranch Guided Nature Walks

**10:00 a.m. – 3:00 p.m.: Guided hikes at 10:00 a.m., noon and 2:00 p.m.**

**Saturday ~ October 10, 2015**

**Sunday ~ October 11, 2015**

For the first fall ever, this year the Martin Griffin Preserve's Volunteer Canyon will be open to the public. Call 415.868.9244 ext. 110 for more information. *No reservation required*

 Open to the Public Spring 2016

**Saturdays, Sundays and Holidays from April 2 – July 31, 2016**

**Weekends ~ open 10:00 a.m. – 4:00 p.m.**

**Weekdays (except Mondays) ~ open by reservation 2:00 p.m. – 4:00 p.m.**

Come hike the more than eight miles of trails at ACR's Martin Griffin Preserve. Visit the newt ponds and enjoy the wildflowers. Knowledgeable Ranch Guides will answer your questions.

Call 415.868.9244 ext. 110 for more information

### Modini Mayacamas Preserves

 Nature Hikes

Explore the rugged terrain of ACR's newest nature sanctuaries, just east of Healdsburg. Join a natural history, local history and birdwatching hike guided by a local naturalist. Learn more at [www.egret.org/calendar](http://www.egret.org/calendar) or contact ACR Resource Ecologist David Self at [david.self@egret.org](mailto:david.self@egret.org).

## EXPLORE



Signature  
Event



Nature  
Hikes



Outdoor  
Learning



Volunteer



Member  
Events



Preserve  
Visits

Open to the public unless otherwise noted.  
Donations greatly appreciated



## Martin Griffin Preserve

### 👤 🏠 Ranch Guide Training

**Saturdays ~ January – April 2016 beginning January 30**

Become a Ranch Guide of ACR's Martin Griffin Preserve and share your knowledge and appreciation of nature. Spend eight Saturdays learning about the natural history of the preserve – birds, plants, aquatic critters, Bolinas Lagoon ecology and more! Training includes techniques for interpreting natural history and leading guided nature walks. Ranch Guide graduates commit to working four weekend days for two seasons. Great for birders, nature enthusiasts, novices and experts alike.

Interested? Contact [acr@egret.org](mailto:acr@egret.org) or 415.868.9244 ext. 110

### 👤 🏠 Docent Training

**Wednesdays ~ September 2016 – March 2017**

Immerse yourself in natural history and inspire a conservation ethic in the children you teach—become a Docent of ACR's Martin Griffin Preserve. The next docent training session begins in September 2016. Classes meet weekly on Wednesdays for 24 weeks. Learn about birds, insects, pond life and teaching techniques. Three units of college credit are available. Upon graduation, docents have the knowledge and confidence to lead field trips for schoolchildren.

Need more details? Contact [acr@egret.org](mailto:acr@egret.org) or 415.868.9244 ext. 110

### 👤 Spring 2016 Workday

**Saturday ~ March 5, 2016**

**9:15 a.m. – 1:00 p.m.**

**1:00 p.m. lunch**

Meet in Picher Canyon

Help us with trail work, library work, pulling weeds, planting native flowers or cooking the lunch (ACR provides). Bring your favorite tool and gloves for outdoor projects.

Registration required: [rsvp@egret.org](mailto:rsvp@egret.org) or 415.868.9244 ext. 110

## Tomales Bay

### 👤 Kayaking

**Saturday ~ November 14**

**Meet 8:30 a.m., kayak 10:00 a.m. – 2:00 p.m.**

*Rain date*

**Sunday ~ November 15**

**Meet 9:00 a.m., kayak 10:30 a.m. – 3:00 p.m.**

Join ACR Director of Conservation Science John Kelly and Board Director Jude Stalker for one of these special-access, members-only kayak tours of Tomales Bay. We'll launch from Cypress Grove Preserve and be on the water for several hours. Experienced and new kayakers comfortable on the water are welcome.

*By invitation only*

Not an ACR member? Become a Patron today and join us for this members-only event!



Cypress Grove Preserve on Tomales Bay

Photo by Ron Barchin

## ACR Research: Climate Impacts on Herons and Egrets

ACR Ecologist Emiko Condeso and I recently analyzed and combined regional climate data with ACR's long-term studies of herons and egrets.<sup>1</sup> Our report describes how climate change is likely to affect these wetland icons of the San Francisco Bay Area.



Great Egret with chicks

Photo by Wyn Hoag

Herons and egrets depend on healthy wetlands for their survival and reproduction. However, the predicted increases in regional rainfall seem likely to actually *reduce* the number of herons and egrets that nest here.

Forecasts for northwestern California suggest more winter rainfall, especially north of San Francisco, and a decrease in spring rainfall. Storms are expected to become more frequent and intense.

### Severe weather poses a threat

Our study revealed that severe weather will likely hinder the growth and resilience of regional heron and egret nesting abundances. Cold temperatures or foraging constraints from storms may limit the survival of young, inexperienced birds during their first winter.

Unusually heavy rainfall might also limit the development of wetland prey populations, the food sources that support herons and egrets. In addition, major storms, especially in spring, could cause some birds to depart for milder regions.

### Protecting juvenile birds may be the key

Surprisingly, the number of nesting herons and egrets in our region shows little dependence on the production of fledglings. Instead, nest numbers may depend more on the survival of juveniles, which do not breed until their second year. This suggests managers should work to buffer wetland habitats from the impacts of extreme weather, to help ensure the survival of young herons and egrets and their prey. ■

<sup>1</sup>Kelly, J. P., and T. E. Condeso. 2014. Rainfall effects on heron and egret nest abundance in the San Francisco Bay Area. Wetlands: 1-11. [www.egret.org/kelly-and-condeso-2014-wetlands](http://www.egret.org/kelly-and-condeso-2014-wetlands)



John Kelly,  
Director of  
Conservation  
Science





Jennifer Potts with firefighter

## Heronry Updates

For the second consecutive year, no herons or egrets nested at the Martin Griffin Preserve in West Marin. Despite this, Great Blue Herons and Great Egrets nested across Bolinas Lagoon at the Bolinas colony again this year.

Nest abundance for both species remained similar to last year. Great Blue Herons established 10 nests and Great Egrets established 27 nests. Nest success was below average but brood sizes were normal for both species.



Bald Eagle in heron and egret colony

An adult Bald Eagle and a raven pair were both observed in the Bolinas colony and caused the failure of at least three nests. ■

## Fire Ecology in Chaparral

ACR Resource Ecologist Jennifer Potts recently led a field tour for 40 fire practitioners, botanists and wildlife professionals at the 2nd Annual Northern California Chaparral Symposium.

Jennifer's UC Berkeley graduate research was the highlight of the symposium with a 10-year anniversary visit to her 120-acre site.

Jennifer's research is the only known replicated study of chaparral plant and bird response to fuel reduction using prescribed fire and mechanical shrub removal. ■



Chaparral regenerated after fire





## Water Wise at ACR's Modini Stewardship Center

At ACR's new Modini Stewardship Center in Healdsburg, the thirsty lawn has been replaced with a vibrant and diverse assemblage of native plants.

We've reduced water use, and the approach to the building has been transformed. It's not only the humans who find it inviting...diverse pollinators are thriving. **Thank you** to the volunteers who have put in hundreds of hours over the past year!

226A Center Street, Healdsburg

707.431.8184

[modini@egret.org](mailto:modini@egret.org)

Visit [www.egret.org](http://www.egret.org) for upcoming events and workdays. ■

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*Emeritus Director*

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## Volunteer Spotlight

### Rock On, Stewards!

This spring the Bouverie Stewards, habitat restoration volunteers of the Bouverie Preserve, broke a lot of big rocks into smaller rocks for the new Waterfall Overlook Trail. The gravel was layered on a fresh footpath to skirt an impassible slide and provide access for our nature education and public visitors.

The new trail was a labor of love, ingenuity and community building. With the California Conservation Corps and the Sonoma County Trails Council, the Stewards braved poison oak, cut back sharp brush, moved boulders, constructed steps, installed erosion controls, and...smashed a lot of rock.

*Thanks to Bouverie Stewards Bob Ahders, Dave Chalk, Ben Cook, Bob Cox, Chris Engel, Jobina Forder, Denny Fujita, Bob Hahn, Hugh Helm, Earl Herr, Ruth Lombard, John Schwonke, Richard Shipp, Glenda Ross, and Bouverie Docents Richard Carlson, Jim Moir, Lynne Myers and Mike Witkowski. ■*



## Stay in the Loop

### eNewsletter

Published every two months, our eNewsletter brings you updates from the preserves, school group visits, latest findings from science staff, volunteer opportunities and ways to explore ACR's nature sanctuaries.

Visit [www.egret.org](http://www.egret.org) to opt in.

### Green Your Mailbox

Join us in our continuing commitment to green practices and choose to receive the ACR Bulletin online.

Let us know if you'd like to opt out of the snail mail version by contacting Leslie Melendy at ACR Headquarters at 415.868.9244 ext. 110 or [leslie.melendy@egret.org](mailto:leslie.melendy@egret.org).

### Become an ACR Member

Audubon Canyon Ranch members and corporate sponsors think globally and act locally through ACR's land preservation, nature education and conservation science programs. Please join today, and together we will protect wildlands in Marin, Sonoma and Lake counties.

Join us! Contact 415.868.9244 ext. 119, [support@egret.org](mailto:support@egret.org) or visit [www.egret.org/membership](http://www.egret.org/membership).

### Members' Discount

Become a member and take advantage of the Members' 10% discount in the ACR Bookstore at the Martin Griffin Preserve!

Visit [www.egret.org/membership](http://www.egret.org/membership) to join.

### Get Connected

Find us on social media:



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## Our Mission

ACR protects our natural and human communities through land preservation, nature education and conservation science.

## Updated Logo & Approach

For the first time in 53 years, Audubon Canyon Ranch (ACR) has unveiled a new brand and communications plan designed to increase the public's understanding of our mission, and the impact we make in our communities.

Read more on our blog:  
[www.ow.ly/ROpe5](http://www.ow.ly/ROpe5)

## Visit Us

*To visit these preserves, see the  
pull-out Calendar of Events inside*

### Bouverie Preserve

Woodlands in the Valley of the Moon

### Martin Griffin Preserve

Sweeping Coastal Views in West Marin

### Modini Mayacamas Preserves

Wilderness in the Mayacamas Mountains

### *By appointment only*

### Cypress Grove Research Center

Call 415.663.8203 to schedule

The ACR Bulletin is published twice yearly as a benefit to our members, supporters and volunteers.

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California Pipevine Swallowtail