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More Shorebirds After Restoration

Betty Burridge's Legacy in the Mayacamas

Members Events, Hikes & Volunteering
The stewardship of ACR properties is one of our highest callings. With open space under constant pressure, protecting and restoring the habitats entrusted to us is a commitment we take very seriously. ACR’s preserve system of 26 properties covers over 5,000 acres in three counties, and it’s a legacy we are proud to uphold.

We also recognize that our preserves are part of a larger ecological landscape. So we work with other landowners to ensure that our science-based approach improves the health of the environment beyond ACR’s borders.

**Fire power**

As a regional leader, we use cutting-edge science to address important conservation issues that impact our natural and human communities. Recently we launched the Fire Ecology Program under the direction of Dr. Sasha Berleman.

Prescribed fire has the potential to be one of our most effective ecological tools. These controlled burns allow us to manage and restore natural landscapes, as well as help to prevent catastrophic wildfires.

As the only conservation nonprofit in the region with a dedicated fire ecology staff, we are committed to sharing our expertise. We will work both on and off our preserves, with federal and state agencies, to proactively restore ecosystem health and improve wildfire safety.

**Current, original science**

ACR is fortunate to have 12 of 31 staff members with a master’s degree or higher in science, including three with doctorates. Their research results are incorporated directly into our education programs, reaching thousands of participants every year. This fosters a connection to the land that is both personal and powerful.

By having a strong mission that is equally grounded in science, education and stewardship, we have developed a synergy that truly generates “Conservation in Action.”

“Prescribed fire has the potential to be one of our most effective ecological tools and we are committed to sharing our expertise with the community.”

- John Petersen
ACR has long had an eye on climate change and its local impacts. This fall, we shifted our efforts to actively address those effects at Martin Griffin Preserve on the east shore of Bolinas Lagoon.

The 1,000-acre preserve encompasses four canyons that drain the 1,500-foot Bolinas Ridge. These stream valleys could accommodate overflow from Bolinas Lagoon in the face of projected sea level rise and the increased frequency and magnitude of storms.

The critical role of the valleys

The Bolinas Lagoon Locally Preferred Plan documents describe the valleys’ distinctive coarse sediment with strong groundwater seeps. These features are critical for maintaining brackish marsh zones as lagoon boundaries change.

Highway 1 now cuts off the stream valleys from the lagoon. With mud-choked culverts and sediment deposits above the highway, storm runoff has nowhere to go. This creates regular flooding and further habitat destruction. That’s why restoration and maintenance of these canyons is a top stewardship priority.

Next steps

ACR is working with Kamman Hydrological Engineering on a phased assessment. The study is identifying next steps and best management practices for all four canyons of Martin Griffin Preserve as well as evaluating risks to our facilities and infrastructure.

Learn more about the Bolinas Lagoon Project:
http://farallones.noaa.gov/eco/bolinas/welcome.html

ACR invites members and supporters at the Patron level and above ($500+) for a hydrology walk through the canyons with Gwen Heistand and Jeanne Wirka. Details page 10
FIRE ECOLOGY PROGRAM

Harnessing One of Our Most Effective Ecological Tools

This past spring ACR’s new Fire Ecology Program put months of planning into action when roughly 18 acres of grassland and oak savanna on the 535-acre Bouverie Preserve were targeted for an ecologically planned, safely implemented and scientifically monitored controlled burn.

The event was conducted in partnership with CAL FIRE, the National Park Service and local fire agencies. It highlights ACR’s commitment to the goals of a statewide memorandum of understanding for increased use of prescribed fire to address hazardous fuel loads and declining ecosystem health throughout the region.

Acknowledging fire-adapted ecosystems

Fire is a core ecological process in most California ecosystems. For thousands of years Native Americans used fire throughout California, particularly in the North Bay, to manage landscapes for food, textile production and improved wildlife habitat.

As a result, our native plants are adapted to specific fire types and our wildlife depend on the effects of fire to thrive and coexist in balance. The healthy function of our ecosystems cannot be untied from this fundamental ecosystem process.

California's dire fire deficit

Today, after over a century of suppression in California, landscapes are in a dire fire deficit. Fire suppression has led to documented reductions in native plants and oaks, and an increase in fire-intolerant pests and disease.

Simultaneously, this legacy of fire suppression threatens human safety. Accumulating fuel loads and lengthened fire seasons contribute to tremendous wildfires. Fire agencies, land managers and researchers have learned that fire cannot be prevented, only postponed, and often with drastic consequences.

Controlled burn objectives

- Restore oak woodlands by promoting oak seedling recruitment.
- Improve wildlife habitat by reducing thatch. Raptors like the red-shouldered hawk and many other animal species need open areas in which to hunt.
- Prevent the spread of Sudden Oak Death. Research indicates fire may actually kill SOD spores.
- Prevent the spread of noxious weeds like yellow star-thistle.
- Restore native plant biodiversity, which supports hundreds of species of pollinating insects.
With careful timing and preparation, low-intensity controlled burns can be safely implemented to remove excess fuel and restore natural ecosystem processes.

**A proactive role to restore North Bay landscapes**
ACR protects over 5,000 acres in Marin, Sonoma and Lake counties. Our core nature preserves exist in a matrix of urban, rural and open space areas.

Recognizing our unique role in the region, ACR has been chosen to build a multi-county, multi-agency coalition for ecological burning. We will host a Northern California Prescribed Fire Training Exchange (TREX) for diverse regional agencies and land managers in spring 2018.

TREX is a nationwide, cooperative prescribed fire training and implementation program that uses protocols developed by the Nature Conservancy’s Fire Learning Network. The week-long event will be based at Bouverie Preserve and will include controlled burns on private and public lands throughout the region.

**A first for the Bay Area**
Previous California TREX events have been limited to the sparsely populated Klamath, Siskiyou and Trinity areas. Now ACR is pleased to bring TREX to the Bay Area and model real-world solutions for the way a rural-urban community lives — and works — with fire.

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Clockwise from top left: Fire personnel set strip burns, working their way from highest to lowest elevation; aerial view of the fire unit taken at the conclusion of the half-day event; partner observers included members of the Federated Indians of Graton Rancheria and land managers from Sonoma Land Trust and Sonoma Mountain Preservation Foundation; ignitions team members from the National Park Service; prior to burn day, CAL FIRE set up a weather-bot used to inform Bay Area Air Quality Management Board of daily weather conditions; a post-burn view of the Bouverie Preserve’s oak savanna reveals a thatch-free grassland, supporting native species repopulation.

**Video content:** View aerial footage of Bouverie Preserve’s controlled burn online at [https://egret.org/fire-ecology-program](https://egret.org/fire-ecology-program)
Is it true that everything in nature is connected? Or does the connectedness have its limits?

Our recent scientific article, published this summer in *Restoration Ecology* (Kelly, J. P., and T. E. Condeso. 2017), explored how the concept applies to tidal marsh restoration. First, we examined whether restoring a tidal marsh can stimulate higher winter shorebird populations. And if so, are the benefits of restoration localized or do they extend to more distant populations?

**Impact of restoring the Giacomini Wetlands**

In 2008, the Point Reyes National Seashore reintroduced tidal waters to the Giacomini Wetlands. This 550-acre section of previously diked pastures at the southern end of Tomales Bay had been isolated from tidal action for nearly six decades.

Immediately, circulating tides began to reshape the new wetlands. Shorebirds flocked from elsewhere in the bay, sweeping into the evolving restoration site with each ebbing tide. It was exciting to see so many birds attracted to the new wetland, but we didn’t know if it would mean more winter shorebirds in the surrounding region.

Limited reaction to new marsh

This study, based on ACR’s 27 years of monitoring throughout Tomales Bay, revealed that the tidal marsh restoration did swell the number of wintering shorebirds. However, it applied only to southern Tomales Bay, not the northern end.

In other words, shorebirds wintering nearby benefitted from habitat restoration only if the new environment was within their normal foraging ranges (a few to several kilometers).

One key implication of the research is that protection of winter shorebird abundances may require multiple restoration targets.

As we respond to rising sea levels in our coastal marshes or remove barriers to allow for the landward shift of tidal marsh, we must consider the foraging range of particular wintering groups. Hopefully, conservation efforts will ensure that populations of birds and other wildlife stay connected to the resources they need in this rapidly changing world. ■
WildCare, a Bay Area leader in wildlife rehabilitation and environmental education, has recognized ACR Director of Education Gwen Heistand as an environmental educator of the highest caliber.

The Terwilliger Environmental Award is named for nationally renowned Marin naturalist and educator Elizabeth Terwilliger. It’s presented annually to an educator who has inspired Bay Area children and adults by making nature study fun and exciting, and led the way with new insights and methods for environmental education.

WildCare received nearly 50 letters of support for Gwen from members of the environmental education community.

“I’m incredibly honored to be in the company of many of my mentors and teachers, said Gwen. “Although I never personally met Mrs. T, the people I teach ‘shake hands with Hazel’ and ‘make a V’ with their arms because her legacy lives in the lexicon of natural history education.”

In addition to her role as Director of Education, Gwen has served as the Preserve Biologist at Martin Griffin Preserve since joining ACR in 2002.

“We have been so fortunate to have Gwen at the helm of ACR’s education programs,” says John Petersen, ACR executive director. “Her vision, creativity, innovation and leadership have proved inspirational to hundreds of volunteers and others touched by her knowledge and passion for learning over the past 15 years. I can’t think of anyone more deserving of this honor than Gwen.”

Gwen teaches classes to volunteers in all aspects of natural history and works with the ACR science staff on research and resource management programs.

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Juniper Program expands field instruction

ACR is proud to announce the 2017 Juniper Junior Naturalist graduates. Twenty-seven extraordinary fifth-grade naturalists completed 30 hours of field instruction, from community ecology, natural history and watersheds to geography, map reading and Native American history and skills. The expanded Juniper Program includes stewardship and leadership components. Trainees learned to monitor nest boxes, transplant native grasses and remove invasive plants. After graduation Junipers assist with field research and restoration, receive advanced instruction and serve as nature walk co-leaders. The 24-year-old Juniper Program, based at ACR’s Bouvierie Preserve, is funded in part by Community Foundation Sonoma County, Keysight Technologies Foundation and donations to ACR.

Juniper Profile: Jared Jacobs, ‘03

As a boy Jared Jacobs was captivated by science and nature and became a Juniper Junior Naturalist in 2003. This fall, returning to Bouvierie Preserve with a biology degree from the University of Oregon, Jared has taken on three positions — Juniper Science Intern, Resource Ecologist Seasonal Assistant and part-time Land Steward. “What a gift this opportunity has been to both observe and be a part of the efforts taken to preserve the land where my natural heritage began,” says Jared.

Peer mentor eyes potential career in environmental conservation

After serving as a peer mentor for the 2017 Conservation Science Intensive for young women, Amy Stanfield sought to gain field research experience as the summer intern for the Mountain Lion Project. The Sonoma Valley High School senior is helping the team gather data on mountain lion feeding and sleeping behavior.
Betty Burridge’s Lifelong Love of Birds

By Phil Murphy

Pioneering environmentalist, bird lover and editor Betty Burridge left $500,000 of her estate to ACR. The Sonoma resident, a long-time member of the Clerin Zumwalt Legacy Circle, designated her gift to protect and maintain ACR’s Modini Mayacamas Preserves.

“Betty was aware that land preserves can benefit enormously from thoughtful and intentional stewardship,” says her trustee and cousin, Susie Cummings.

“I hope what Betty did speaks to ACR supporters,” she adds. “Most of us don’t have property to donate. But we could include a gift in our estate plan to help ACR maintain its preserves long-term.”

**Honored for her contributions**
The *Press Democrat* spotlighted Betty in a tribute to distinguished Sonoma County residents who died in 2016:

> Her profession was physical therapy, but her passion was nature. Burridge cherished birds for their beauty and all their fascinating traits, and also for their canary-in-the-coal-mine role as living gauges of the health of the environment.

The article singled out her work as editor of the *Sonoma County Breeding Bird Atlas: Detailed Maps and Accounts for Our Nesting Birds*, and her early efforts to protect bird habitat. It cited her comments of 30 years ago:

> “In these times of rapid growth and development within Sonoma County, wildlife habitat is disappearing every day.

> “Each of us can recall fields where hawks used to soar, that now are shopping centers; farm ponds where ducks and shorebirds lingered, that since have been drained.”

**A city girl who loved nature**
Born and raised in San Francisco, Betty developed an early love of the wild areas of California. Her feelings were cemented on family trips to her great aunt’s beach cottage south of the city.

ACR is grateful to Betty and all the forward-thinking members of the Clerin Zumwalt Legacy Circle.

For Clerin Zumwalt Legacy Circle information, contact Director of Philanthropy Naomi Sultana Young at naomi.young@egret.org or 707.938.4554 ext. 311.
VOLUNTEER SPOTLIGHT

Tom Baty – Steadfast at the Helm

For nearly 30 years, volunteer Tom Baty has been the rock of the ACR winter waterbird monitoring survey. Boat at the ready (and pickled herring stashed for later), he provides support and leadership as we set out to measure waterbird abundances.

Beyond contributing his boat and skipper skills, Tom also coordinates the birding teams on the water and helps track the movements of often-missed flocks that fly far above the bay.

The Tom effect

These long-term monitoring projects provide a critical barometer of ecosystem health that becomes more powerful with each additional year of data.

Volunteers like Tom, who continue to give their time and expertise, allow conservation policies to be rooted in the best available science.

It takes a team

“Many on our monitoring team tell me it’s the volunteer community and their commitment, as much as the splendor of the birds and Tomales Bay, that make the work enjoyable,” says ACR Ecologist Emiko Condeso.

The survey can be difficult, but those who are drawn to it are incredibly knowledgeable, loyal and generous. “Tom is the best example of all these things,” says Emiko.

Tom Baty has been an ACR volunteer, leader and member of the Advisory Board, as well as a collaborator on local conservation issues since the early 1990s. ACR is grateful for his important contributions.

The ACR Board and Staff

Maintenance

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Martin Griffin Preserve (MGP)
Bouverie Preserve (BP)
Cypress Grove Research Center (CGRC)
Modini Mayacamas Preserves (MMP)
ACR Programs, Events & Expert Lectures, Summer 2017

Programs and events are open to the public unless otherwise noted. More detail and full calendar listing online www.egret.org/calendar

Nature
Hikes
Outdoor
Learning
Volunteer
Member
Events
Preserve
Visits

Martin Griffin Preserve
Hydrology and Climate Change: A Walk at the Martin Griffin Preserve
Saturday ~ July 22, 2017
9:30 a.m. – 12:30 p.m.
ACR invites members and supporters at the Patron level and above ($500+) for special access to the Martin Griffin Preserve. Join Director of Stewardship Jeanne Wirka and Director of Education/MGP Resident Biologist Gwen Heistand for a walk through the canyons on the east shore of Bolinas Lagoon. Hear about ACR’s new project that takes a watershed approach to stewardship of the 1,000-acre preserve. With projected sea level rise and increased frequency of extreme storms, the Preserve’s east shore stream valleys could provide important accommodation space for Bolinas Lagoon.
By invitation only
Not an ACR member? Become a Patron at www.egret.org today and join us for this members-only event!

Annual ACR Appreciation Picnic
Save the date!
Saturday ~ September 16, 2017
11:30 a.m. – 3:00 p.m.
ACR invites you—volunteers, members (Sponsor-level+) and donors ($250+ annual gift)—for an autumn afternoon at the Martin Griffin 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 to make a donation today!

Reptiles & Amphibians of Sonoma County
Thursday ~ July 20, 2017
7:00 - 8:00 p.m.
Bennett Valley Guild
4145 Grange Road, Santa Rosa
Join friends at the Bennett Valley Guild for an engaging talk on the reptiles and amphibians of Sonoma County given by Jeanne Wirka, ACR Director of Stewardship.

What Makes Spiders So Amazing
Saturday ~ July 22, 2017
6:00 - 8:00 p.m.
Safari West
3115 Porter Creek Road, Santa Rosa
What if you could hear with your ankles, shed your skin to get smaller, or had to carry a hundred or so of your progeny around on your back after they were born? ACR Director of Education Gwen Heistand will be the featured after-dinner speaker.

Dinner reservation required, call 707-579-2551

ACR Mountain Lion Project: Meet Your Neighbors
Thursday ~ August 10, 2017
7:00 - 8:30 p.m.
Laguna de Santa Rosa Foundation
Heron Hall
900 Sanford Road, Santa Rosa
Join ACR Wildlife Ecologist Dr. Quinton Martins for the latest update on ACR’s Mountain Lion Project and his work with other large carnivores around the world.
Reservation required: www.lagunafoundation.org

Egret Telemetry & Waterbird Research Update
Monday ~ September 18, 2017
7:00 p.m.
Madrone Audubon Society
First United Methodist Church
1551 Montgomery Drive, Santa Rosa
Madrone Audubon Society Guest Speaker series welcomes ACR Director of Conservation Science John Kelly for a look at ACR’s exciting work tracking Great Egrets utilizing GPS technology. John will also provide supplemental updates and results from ACR’s winter waterbird research on Tomales Bay.

“It was fun to learn about tracks, scat and the nighttime activity of resident wildlife plus stunning views.”
- Mary L., hiker
Summer 2017

Bouvierie Preserve

**Twilight Hikes**
Friday – July 28, 2017
Friday – August 11
Friday – September 8

**Guided Nature Walk**
Saturday – September 9, 2017
Experience the beauty and rich natural history of this 535-acre preserve.
Registration required: [www.egret.org/calendar](http://www.egret.org/calendar)
Member / Student: $15, Non-member: $20, Free for children under age 18

Martin Griffin Preserve

**Nature Connection Programs**
Saturday – July 22 - Little Folkies Music & Nature Exploration
Saturday – July 29 - Storytelling with Ane Carla Rovetta
Martin Griffin Preserve has something for nature-lovers of all ages! Embark on guided interpretive experiences with experienced naturalists or just have fun connecting with nature through music and art.
Registration required: [www.egret.org/calendar](http://www.egret.org/calendar)
Member / Student: $15, Non-member: $20, Free for children under age 18

Modini Mayacamas Preserves

**Guided Nature Hikes**
Friday – July 28 - Wildflower Friday
Sunday – July 30 - Wildflower Tour
Friday – August 4 - Birds + Botany
Friday – August 25 - Wildflower Friday
Sunday – August 27 - Wildflower Tour
Join us for a range of natural history and ethnobotany guided hikes. Themed expert-led hikes include Birds & Botany, Trees of the Preserves, Hiking the Foss Trail, Wildflowers and more.
Registration required: [www.egret.org/calendar](http://www.egret.org/calendar)
Member / Student: $15, Non-member: $20, Free for children under age 18

 Orientation to Modini Mayacamas Preserves + Optional Hike
“required for independent hiking access”
Saturday – August 12
An introduction to the Preserves and their history. Agree to ACR rules and you will be given a printed trail guide and permit for independent hiking.
Registration required: [www.egret.org/calendar](http://www.egret.org/calendar), Suggested donation: $20 per person

ACR Conservation Center, Downtown Healdsburg

**Wildflower Show**
Saturday – July 29, 2017
Saturday – August 26
10:00 a.m. – 2:00 p.m.

ACR's Conservation Center, located just 1/2 block off the Healdsburg Plaza, offers visitors a selection of video captures from our wildlife cameras and seasonally changing art exhibits. Stop by to appreciate wildflowers in the Native Garden and specimens collected weekly from the Modini Mayacamas Preserves. See what's blooming in the Native Garden and on the Preserves and learn about the ecology, pollinators and uses of these plants by wildlife and people.
Our Mission
ACR protects our natural and human communities through land preservation, nature education and conservation science.

Become a docent of the Bouverie Preserve — training begins in September!
Immerse yourself in natural history and inspire a conservation ethic in the children you teach.

Program Introduction / Orientation Hikes:
July 26, August 5, August 16
Details and more events listed inside, pages 10-11!

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

If you’d like to opt out of the snail mail version, contact Leslie Melendy at ACR headquarters at 415.868.9244 ext. 110 or leslie.melendy@egret.org.

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