Natural History, Human History
In February of 1962, the Secretary of State of California affixed the official seal on our Articles of Incorporation. It marked the humble beginnings of one of the Bay Area’s most beloved, inspirational and effective conservation organizations.

Fifty remarkable years later, Audubon Canyon Ranch, which protects nature through land preservation, environmental education and conservation science, thrives and is alive because of:

- committed, caring and compassionate volunteers who are tireless, brilliant and the heart of this lively organization
- generous and giving members, donors and supporters who help fund the ACR mission
- professional, patient and positive Directors, Advisors and Emeritus Directors who have led this nonprofit into environmental and fiscal health
- energetic, earnest and well-educated staff, who bring passion and years of learning and experience to the public and to their positions

This community, joined in spirit and in heart, shares a deep and enduring love for advancing ACR’s mission through programs such as:

- **Education**, which connects children and adults with nature and promotes ecological literacy, stewardship and life-long learning
- **Conservation Science**, which conducts scientific research to address ecological problems related to the conservation of birds, wetlands and other natural resources on ACR lands and associated California landscapes
- **Habitat Protection and Restoration**, which promotes the effective stewardship of our sanctuaries and surrounding areas in Marin and Sonoma counties

ACR has spent five decades protecting and restoring habitats critical to the survival of the Bay Area’s fish and wildlife. We have opened the door to nature for thousands of children and adults, positively and permanently touching individuals from all walks of life. Grounded in our rich history, ACR is perfectly poised to continue this tradition of excellence for the next 50 years!

As we expand ACR’s preserve system, deepen and diversify our connections with local communities and like-minded organizations, and provide leadership on cutting edge scientific inquiry, we must remain mindful of those who went before us.

We look forward to honoring the past, celebrating the present and welcoming the future at the ACR 50th Anniversary Picnic on September 8, 2012.

J. Scott Feierabend is the ACR Executive Director
In early June of 2011, a small group of dedicated volunteers gathered in Gilman Hall at the Bouverie Preserve of Audubon Canyon Ranch. We sat, leaning in close around one of the small round tables, studying photographs of splotchy leaves and bleeding tree bark.

the SOD pathogen, then mapped on a website and shared with the community. Outside Gilman Hall, the sky was gray, and it was starting to rain. We were in for a long, wet field day, but at least it wasn’t freezing cold.

Wait a minute. Rain? In June? That’s right—warm, late rains—perfect conditions for promoting the spread of *Phytophthora ramorum*, the pathogen that causes Sudden Oak Death. Such conditions were typical when I was studying the disease at Sonoma State University from 2003 to 2005, and we experienced them again in 2010–2011.

**The biology of SOD**

As I explained to the group what we know about the biology of the SOD pathogen microbe, it was difficult to avoid exclaiming what we used to say in school: “It’s a great year for Sudden Oak Death!”

But that sounds like cheering for the bad guy—a disease that has caused extensive mortality of oaks in coastal California and threatens to extirpate the highly susceptible tanoak (*Lithocarpus densiflorus*) from the Bay Area altogether.

Sudden Oak Death is indeed a bad guy, although high rates of spread in those earlier years did help us learn a lot about the pathogen. A water mold, not a fungi, *Phytophthora ramorum* is in the same genus as the pathogen that caused the devastating Irish potato famine in the 1800s (*Phytophthora infestans*).

The genus *Phytophthora*, its name aptly derived from Greek roots meaning “plant destroyer,” bears a number of economically important pathogens and is a member of the kingdom Stramenopila.

**Unclear origins**

No one knows exactly how this pathogen got here or when it arrived, but evidence strongly supports that *Phytophthora ramorum* is not native to California. Since researchers began studying SOD in the mid-1990s, it has been found in 14 counties in California and one county in Oregon.

It has also been unintentionally introduced in Europe, where it continues to be detected in nurseries, gardens and woodlands.

The results of the SOD Blitz at Bouverie Preserve showed a marked increase in the number of positive samples over past years. Not surprising—*Phytophthora ramorum* thrives and disperses easily under warm, wet conditions such as those we experienced during the Blitz.
How the mold spreads

The rather complex life-cycle begins with growth of branching, thread-like hyphae in the host plant tissue. These threads bear vessel-like structures called sporangia that are filled with tiny, active zoospores. Under the right conditions, the zoospores emerge and swim to new hosts aided by two flagellating tails.

The sporangia can also break off and become airborne, traveling to new locations on gusts of wind. Most dispersal occurs over short distances of five to ten meters via wind, water droplets and rain splash, though some spores do travel long distances during storms to cause new infections quite far from their origin.

Two forms of infection

Sudden Oak Death is actually a disease of more than 100 species of trees, shrubs and herbaceous plants. Depending on the identity of the host, the pathogen causes two distinct forms of disease: a lethal canker form and a non-lethal leaf spot, or foliar blight. In the unfortunate singular case of tanoak, both forms of disease are seen.

The canker form affects tanoak and several oaks in the genus Quercus (excluding the white oaks). As the name Sudden Oak Death implies, it is almost always lethal and kills infected individuals by girdling. The foliar form of the disease, which affects the vast majority of hosts, is non-lethal and causes plants to develop leaf spots in areas where water tends to collect.

Here is where it gets tricky. Although species susceptible to the canker form of the disease rarely survive, causing big impacts on woodland communities, the pathogen does not reproduce well on these hosts. Therefore, the oak species that develop lethal cankers do not contribute to disease spread.

Bay trees—an early indicator

Host species that are susceptible to the foliar disease, however, do contribute to spread. For example, Phytophthora ramorum reproduces very well on California bay (Umbellularia californica), a common foliar host, and infected bay trees can rain copious amounts of spores from their leaves.

Bays are often the first species in an area to become infected, so monitoring levels of the infection on bay trees can give stewards an early indication of which oaks are most at risk.

An interesting result of several studies, including the region-wide SOD Blitz, is that although the disease is widespread, its distribution is still patchy throughout its range. There are many places in the Bay Area that have no or low incidence of infection, reinforcing that preventing human-facilitated spread is a worthy effort.

Slow SOD with good sanitation

Audubon Canyon Ranch stewards—habitat restoration volunteers—prevent spread by practicing good sanitation. They keep pruning tools clean, work from areas with low incidence of infection before moving on to areas with higher levels, and remove mud from equipment and boots.

Oaks are key species in many California coastal woodlands, supporting a rich assemblage of plants and wildlife. From the abundant supply of acorns they produce, to the vast underground mycorrhizal networks of which they are a part, oaks are the foundation of a diverse natural community.

Monitoring the response to the epidemic can teach us much about the ecology of oak woodlands. By working with researchers and concerned citizens, we learn new ways to minimize disease spread and sustain critical ecosystem processes within the lands we protect.

Like the dedicated group that spent a day with me in the rain at the Bouverie Preserve, Audubon Canyon Ranch and its researchers, educators and stewards will always be listening for the lessons of our forests and striving to put what we learn into practice.

Emiko Condeso is ACR’s Ecologist & GIS Specialist, holds a Master’s degree in Landscape Ecology and studied Sudden Oak Death in Sonoma County oak woodlands.
Henderson Overlook is one of the most popular nature observation stations of ACR’s Martin Griffin Preserve, from which the historic heronry can be viewed.

Last spring, docents and their student groups enjoyed the improved openness and access of the Overlook’s new platform, which represented the completion of phase one of the Overlook’s rebuild. The cost was largely covered by legacy funds bequeathed by ACR supporters Leo and Miriam Bodian, as well as a fundraising effort by ACR Ranch Guide volunteers.

**Phase two underway**

Thanks to a legacy bequest from ACR Docent Rosemary Ames, we are currently in the midst of phase two upgrades. A galvanized steel and wood trellis will ultimately be covered by native vines, providing shade. A weatherproof cabinet will safely house scopes, binoculars and educational materials. Six more scopes will be added—three on the upper level and three on the lower. The lower level’s scope posts will be shortened to make it easier for schoolchildren to view the egret and heron colony. Construction is expected to be completed by mid-March.

Rosemary’s daughter Emily Janowsky says Audubon Canyon Ranch was a special place for her mom. Grandma Rosie and grandchildren Nick, Sam, Isabel and Grace had two favorite spots: at the ponds in search of newts and at Henderson Overlook observing the birds.

**Enhancing a special place**

For Nick and Sam, “searching for newts and banana slugs was heaven,” Emily says. She and her sister, Katie Porter, are “so glad that our mom was able to support the enhancements to the Overlook with the gift from her estate.” The ACR family remembers Rosemary fondly and acknowledges her gift with gratitude.

Audubon Canyon Ranch extends heartfelt thanks to the Bodian family, the Ames family and all the generous donors who made possible these wonderful improvements to Henderson Overlook.

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**CLERIN ZUMWALT LEGACY CIRCLE**

ACR’s Clerin Zumwalt Legacy Circle honors supporters who have included Audubon Canyon Ranch in their estate plans. If you name ACR in your estate plan—at any amount—you become a member of the Clerin Zumwalt Legacy Circle. For more information, contact Didi Wilson, Director of Development and Communications, at 415.868.9244. We welcome your call.

ACR is in strict accord with the ethical guidelines of the National Planned Giving Committee.
Planting seeds of change

Volunteer Spotlight

Plant identification. Seed collection. Site mapping. Rain or shine, such is the life of a Habitat Restoration Steward on any given Thursday at ACR’s Martin Griffin Preserve.

Dave Chenoweth, Judy Dugan, Linda Harrington and Tony Paz (pictured here) are the dependable team that volunteers weekly within the preserve’s Habitat Protection and Restoration Program. “Linda, Judy, Dave and Tony are a vital part of our work here at Martin Griffin Preserve,” says Restoration Specialist Michelle Krieg. “Their dedication to and love for these canyons has been a stable force over the years. They support the field staff in all aspects of site monitoring, weeding, plant propagation and planting. Their humor, excitement and eagerness to learn is always a pleasure and an inspiration.”

ACR Executive Director Scott Feierabend adds, “These folks give so very much of their time and are true workhorses for so much of the habitat restoration work that gets done.”

Thanks to all of the many volunteers whose hard work ensures the nature sanctuaries of Audubon Canyon Ranch are protected and preserved as habitat for native species and nature education. Interested in getting involved? Contact Michelle at michelle.krieg@egret.org. Drop-ins welcome!

THANK YOU, ACR VOLUNTEERS!

Audubon Canyon Ranch salutes the hundreds of individuals listed below for their dedication to ACR and for generously donating their time and energy as Docents, Ranch Guides, Ranch Hosts, Field Biologists, Citizen Scientists, Stewards, Work Day Volunteers, Directors and Advisors. You are the backbone of this organization! For all you do, we thank you!

Girl Scout Troop 810406
Project ReGeneration REI
Sonoma Valley High School American Conservation Experience
Deborah Ablin
Sarah Abraham
Nancy Albright
Ken Ackerman
Robert Alders
Joan Ann Albers
Bonnie Alexander
Julie Allerton
Jane A. Allen
Jason Allen
Judy K. Allen
Kathy Allen
Linda Allen
Sarah Allen
Linda Alwitt
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Joli Jacobs
Diane Jacobson
Nancy Jacobs
Norma Jellison
Martha Jarocki
Scott Jarvis
Fred Jagg
Joy Janigian
Martha Jarocki
Scott Jarvis
Norma Jellison
Bobbi Jenkins
Michelle Jensen
Beverly Johnson
Congratulations, Graduates!

**Docent Training:** ACR congratulates the following recent Bouverie Preserve Docent training graduates.

- Dority Abbott
- June Ambrose
- Janis Arendt
- Ron Berchin
- Billie Blumenthal
- Bill Bridges
- Annie Caro
- Mark Farmer
- Ann Gronvold
- Chilem Guummer
- Iain Jamieson
- Bill Laurie
- Robyn Lawyer
- Patty List
- John Lynch
- Janet Lynn
- Lynne Myers
- Susan Nuerenberg
- Joanne Olsson
- Jason Price
- Richard Randolph
- Betsy Randolph
- Jeff Reichel
- Sidney Schaller
- Julie Shoffer
- McGee
- Sally Stone
- Lisa Summers
- Susan Teel
- Billie Thrower
- Gwendolyn Toney
- Kate Twain
- Mike Wirkowski
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- Dan LeBaron
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The low-angled morning sun strikes the slopes of the Modini Ingalls Ecological Preserve revealing subtle traces of an old wagon and stagecoach toll road. We are attempting to map the route of the “Calistoga Road” or the “Foss & Connelly Toll Road.” It winds its way up the steep terrain of the Modini Ranch (now also known as the Modini Ingalls Ecological Preserve) and the Mayacamas Mountains Audubon Sanctuary, both in northern Sonoma County.

Thanks to the generosity and foresight of Jim and Shirley Modini, Audubon Canyon Ranch staff and volunteers have had the pleasure of getting acquainted with these lands. ACR has a planned giving arrangement with the Modinis, and the property is slated to become ACR’s fourth large nature preserve.

A hot springs spa

Between approximately 1865 and 1910, the road was used to transport visitors by stagecoach from Calistoga and Healdsburg to The Geysers, a geothermal area which was developed into a spa. Over the past century of disuse, landslides have obliterated some sections of this road, while other sections have been integrated into ranch roads that are still in use today.

By Dennis K. Fujita

**Early Travelers through the Modini Ingalls Ecological Preserve**

**HONORING STORIES OF THE PAST**

**Clark Foss with passengers leaving Fossville for a trip to The Geysers**

Jim also pointed out the general location of what he and Shirley called Foss Basin, where Foss reportedly maintained a stable and blacksmith shop. From there fresh horses could be obtained for pulling the stagecoaches the rest of the way up the steep grade to The Geysers.

**Advice on showmanship**

An early stagecoach passenger of Foss’s, Tom Thumb of P.T. Barnum’s The Greatest Show on Earth, was reported to have encouraged Foss to become more of a showman in order to capitalize on his excellent stagecoach driving skills.

Thereafter, “Colonel Foss” (or “Old Chieftain”) always wore a pearl-gray Stetson hat, a long duster coat, sported muttonchop sideburns, wielded a
14-foot whip and handled the reins with dexterity. He shouted at the top of his lungs to ensure that oncoming or slower traffic made way for his fast-moving stagecoach.

Many passengers reported that they were motivated to visit The Geysers more to experience the thrill of a stagecoach ride with Foss than to see The Geysers themselves.

*Railroad extension brings more visitors*

Traffic along the Foss Toll Road picked up in 1869, a year following the extension of the Napa Valley Railroad from Napa to Calistoga. Upon disembarking at Calistoga, Geysers-bound passengers could ride Foss’s stagecoach to comfortable accommodations at Fossville. This well-appointed inn was located at the southeastern edge of Knight’s Valley, just north of the divide between today’s Napa and Sonoma county line.

Tales of Clark Foss’s driving skill were spread worldwide by his prominent passengers, as well as by Robert Louis Stevenson’s references to Foss in his book, *Silverado Squatters*. Tragedy occurred in 1874 when Foss lost control of his horses while descending a steep incline, injuring Foss and passengers. Clark Foss retained his colorful personality, but he drove cautiously for the next seven years, before passing the business to his son Charlie.

*Honoring those who came before*

In Foss Basin on the Modini Ingalls Ecological Preserve, fires and land slippage have erased evidence of buildings such as the stable and blacksmith shop. However horseshoes, bricks and other artifacts remain, reminding us of another time.

Jim and Shirley Modini, who willed the Modini Ranch to Audubon Canyon Ranch after more than 60 years of careful stewardship, have asked that the stories of those who passed through these lands not be forgotten.

I was inspired to write this article by the Modini’s desire to protect the land and to honor the people who came before us.

To read the complete history of the Calistoga Road, visit www.egret.org/history.

Dennis Fujita is a Habitat Protection and Restoration volunteer at Bouverie and Modini Ingalls Ecological preserves, and at the Mayacamas Mountains Audubon Sanctuary.

**Acknowledgements:** The author would like to thank Jim and Shirley Modini, Sherry Adams, Ray Robinson and John Rudell for field assistance. Thanks also to Healdsburg Museum curator Holly Hoods for providing research materials and historic photos, Larry and Pam Ostrom for loaning their metal detector, and the Sharpsteen Museum of Calistoga for copies of historic photos.

**Membership with Audubon Canyon Ranch**

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

Call 415.868.9244 or visit www.egret.org to join.

**We are especially grateful to ACR Corporate Sponsors**

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**Greening ACR**

Audubon Canyon Ranch is shifting to electronic communications wherever possible. If you are a volunteer and do not receive email from ACR, contact us at 415.868.9244 to ensure we have your email address.
As we approach the 50th anniversary of the founding of Audubon Canyon Ranch, we are at a major crossroads in ACR’s history.

As usual, there is excitement for the spring season at both the Martin Griffin and Bouverie preserves. Trails have been groomed, spring wildflowers have burst forth, newts are checking out the streams, and migrating birds are busy building new nests. The Docent and Ranch Guide volunteers—both seasoned and new—are out on the trails with schoolchildren and visitors.

**The Mayacamas wildlands**

In northeastern Sonoma County, the Mayacamas Mountains—a true wilderness area—stretches from The Geysers in the north to the Sonoma Valley in the east, including ACR’s Bouverie Preserve. The mountains are home to golden eagles, bears, mountain lions, bobcats, coyotes and deer.

The 1,725-acre Modini Ranch (now also known as the Modini Ingalls Ecological Preserve) lies amid this pristine region. In December 2008, ACR signed a Memorandum of Understanding with Jim and Shirley Modini. We are to manage their ranch in perpetuity, upon their deaths, as part of the ACR preserves.

**Mourning Jim Modini**

This past November, we mourned Jim’s passing. His strong beliefs on how this ranch should be managed will be honored to the fullest by ACR.

Shirley, although frail, is keeping a watchful eye on the ranch, especially the new calves, as we move into the springtime. We are all thankful for the wonderful support both Jim and Shirley have had from Modini family friend Judy Johnston.

**Partnering with National Audubon Society**

Adjacent to the Modini Ranch is the Mayacamas Mountains Audubon Sanctuary, a 1,350-acre preserve owned by the National Audubon Society. It shares a long contiguous boundary with the Modini Preserve. ACR is currently under agreement with National Audubon Society to manage these lands.

Between Modini Ranch and the Audubon Sanctuary preserve, ACR has 3,000 acres of wildlands under management, in addition to the 2,000 which we already own. With the adjacent Sonoma County Agricultural Preservation and Open Space District properties, a total of more than 10,000 acres are protected in this region, providing a corridor for the safe movement of wild animals throughout the year.

**Help us steward these lands**

The entire ACR family is thrilled to take on the responsibility of stewarding these special lands. We ask for your support to ensure that these properties maintain their wild character. There will be opportunities to assist in restoring and maintaining these lands.

In addition, we invite you to join us at the Mayacamas Mountains Audubon Sanctuary for a springtime hike sponsored by Madrone Audubon (www.audubon.sonoma.net/calendar). Hikes are usually on the weekend with topics ranging from geology to wildflower photography, birding and history.

We look forward to exploring these wildlands with you and, together, preserving the habitat of the wild creatures that call this region home.

**Bryant Hichwa is President of the ACR Board of Directors**

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**SAVE THE DATES!**

**the Art of Eating**

**Sunday, June 3, 2012**

1:00 p.m. – 4:30 p.m.

Please join us for sustainable food and wine tastings celebrating *Women Who Change the Way We Eat*

Visit [www.egret.org](http://www.egret.org) to purchase tickets

**Saturday, September 8, 2012**

Audubon Canyon Ranch is proud to announce the celebration of our 50th anniversary.

All volunteers and supporters at the Sponsor ($250) level or above are invited to join us for an **Anniversary Picnic** at ACR’s Martin Griffin Preserve.
### Open to the Public

#### Martin Griffin Preserve (formerly Bolinas Lagoon Preserve)

- **Saturdays, Sundays and Holidays from March 17 - July 15, 2012**
- **Weekends - open 10:00 a.m. – 4:00 p.m.**
- **Weekdays (except Monday) - open by reservation – call 415.868.9244**

Come hike the more than eight miles of trails at ACR’s Martin Griffin Preserve. Visit the newt ponds, view the nesting Great Blue Herons and Great Egrets, and enjoy the wildflowers. Knowledgeable Ranch Guides will answer your questions. **Donations appreciated.**

### Guided Nature Walk

#### Bouverie Preserve

- **Saturdays - 9:30 a.m. – 1:30 p.m.**
- **March 17, April 14, April 21, May 5, May 19, 2012**

Experience the beauty and rich natural history of this 500-acre preserve. Reservations required and accepted one month before each respective hike date: rsvp@egret.org or 415.868.9244.

**Donations appreciated. § Docent Council of Bouverie Preserve**

### Backyard Naturalist Series

#### Bouverie Preserve

- **Saturday - 9:30 a.m. – 2:00 p.m.**
- **April 7, 2012 Wildflowers with Jeanne Wirka**

Geared toward the adult amateur naturalist, these Saturday seminars include time in the classroom and on the trail. One- to three-mile hike. Mildly to moderately strenuous. Bring a bagged lunch and water for the trail. Class size is limited.

$25 per seminar **Discount for members at Sponsor level or above.**

Registration required: rsvp@egret.org or 415.868.9244

### Spring Science Salon

#### Bouverie Preserve

- **Saturday, April 14, 2012, 2:30 p.m. – 5:00 p.m.**

Audubon Canyon Ranch Presents: A Science Salon

**Extremophiles: Life in extreme environments**

$25 (includes salon and reception), $20 for ACR members at Sponsor level or above

Registration required: rsvp@egret.org or 415.868.9244

### Mother’s Day BBQ

#### Volunteer Canyon, Martin Griffin Preserve (formerly Bolinas Lagoon Preserve)

- **Sunday, May 13, 2012**

Bring family and friends for a day of food and fun in Volunteer Canyon. Proceeds benefit Audubon Canyon Ranch and Marin Audubon Society education and conservation programs. Call Mary Anne Cowperthwaite at 415.453.2216 for information. Space is limited. RSVP by May 5. Carpooling strongly encouraged!

$25, $12 children under 12. Mail check payable to: Marin Audubon Society, 141 Oak Avenue, San Anselmo, CA 94960 or visit www.marinaudubon.org to make your reservation online.

### Trail Work Day

#### Bouverie Preserve

- **Friday, May 18, 2012, 9:15 a.m. – 1:00 p.m.**

Help out with habitat protection and restoration projects. Snacks provided.

RSVP to 707.938.4554 or bouverie@egret.org

### Habitat Protection & Restoration Stewards

#### Bouverie Preserve: Mondays – 8:30 a.m. – noon

Bouverie Stewards work intimately with the land throughout the year at the Bouverie Preserve. This dedicated crew assists with all sorts of habitat protection and restoration work, while learning about the ecology behind the project. Examples include: removing Douglas fir seedlings, removing invasive species, using GPS units to map invasive species.

Call 707.935.8417 or e-mail Jen Potts at jpotts@egret.org

#### Martin Griffin Preserve: Thursdays – 9:00 a.m. – noon

Join Martin Griffin Preserve Stewards on Thursday mornings to help with ecological restoration in the preserve’s four canyons. Activities include collecting seeds, propagating native plants, preparing project sites, outplanting and ensuring survival of plants.

Call 415.868.9244 or e-mail Michelle Krieg at michelle.krieg@egret.org

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**More detail on all these nature exploration opportunities is available at www.egret.org.**

To keep up to date on the latest ACR happenings, **sign up for our e-newsletter.** Published once every two months, this free e-mail newsletter highlights updates from the Preserves, including school group visits, latest findings from science staff, volunteer opportunities and ways to come explore ACR’s nature sanctuaries. To sign up or to view past issues, visit **www.egret.org/eNewsletter.**
Our Mission
Audubon Canyon Ranch protects nature through land preservation, environmental education and conservation science.

WHEN TO VISIT

Cypress Grove Research Center
By appointment only  415.663.8203

Bouverie Preserve
See calendar of events inside.

Martin Griffin Preserve
Mid-March to mid-July
Saturday, Sunday and holidays
10:00 a.m. to 4:00 p.m.
Weekdays by appointment only
415.868.9244  Closed Mondays

Martin Griffin Preserve is adjacent to Bolinas Lagoon on Shoreline Highway One, three miles north of Stinson Beach.