



Lagoon Tidings

This Issue

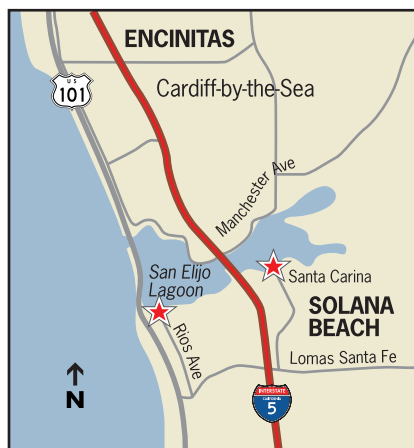
- Lagoon Restoration
- Genomics Project
- Staff Transitions
- Lagoon Day
- President's Council Update

Calendar of Events

Lagoon Day

Saturday, May 10, 9 am–3 pm
Rios Ave. & Santa Carina trailheads

Lagoon Day is hosted by San Elijo Lagoon Conservancy and the County of San Diego Dept of Parks & Recreation and it's **FREE**.



Come enjoy:

- 5-K Run with Doug, 8:30 am (at Rios)
- Guided nature walk, 9 am (at Rios)
- Children's story time at 11 am & 1 pm (at Santa Carina)
- Spring wildflower display
- Migrating and nesting birds
- Doggie welcome table
- Birding with spotting scopes
- Naturalists on hand

For directions visit www.sanelijo.org

Student Signs Unveiled

Changing Historical Perspectives— Through Restoration and Education



San Elijo Lagoon Conservancy with support from the Southern California Wetlands Recovery Project, Earth Island Institute, and Rancho Santa Fe Foundation announced the installation of three student inspired interpretive panels at the San Elijo Lagoon Ecological Reserve. County Supervisor Pam Slater-Price, Solana Beach Mayor Joe Kellejian and Encinitas City Council members Teresa Barth and Maggie Houlihan joined conservancy staff, school officials, parents and 75 students at the unveiling of the artful signs and helped to replant the restoration site with native species. The three interpretive panels display the students' art, poems and writings about the removal of the abandoned sewage tanks that once stood on this site.

Restoration of the site involved students from three local schools—**Cardiff Elementary**, **Rancho Santa Fe Elementary**, and **Skyline Elementary** (in Solana Beach)—in a project designed to educate students about the importance of coastal wetlands. Artwork and writings created by students were incorporated into interpretive panels and installed on site.

The teachers and classes participating in this project were: Jan Hamilton and Kim Douillard of Cardiff Elementary multi age class (MAC), Shannon Applegate of Skyline Elementary 5th grade, and Stacy Halboth of Rancho Santa Fe Elementary 5th–6th grade. ♦

Education Director Position

For detailed information about this position available at the conservancy, go to www.sanelijo.org About Us

Office Space Needed for Conservancy Office

1,500–2,000 sq.ft. near lagoon and preferably donated. Please call Doug at 760 436-3944.

BOARD OF DIRECTORSAndy Mauro, *President*Denise Stillinger, *Vice-President*Barbara Moore, *Secretary*Craig Olson, Ph.D., *Treasurer*

Sally Foster

Mark Huffman

Kevin Johnson

Peter Johnson

Jim McCall

Bob Moore

Margaret Parry

Celest F. Willoughby

John Seiber, *ex officio***STAFF**Doug Gibson
*Executive Director/Principal Scientist*Elaine Dodge
*Development Director*Amy Trujillo
*Biologist*Barry Lindgren
*Scientist*Debby Strauss
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The Tidal Restoration of San Elijo Lagoon

By Doug Gibson, Executive Director / Principal Scientist

Ten years ago, Alan Thum and I wrote the Action Plan for the San Elijo Lagoon Ecological Reserve, outlining projects designed to restore and protect our remarkable wetlands reserve. Tidal restoration is a considerable element of the plan. Let me give some background in this area, review where we are in our current planning phase, and consider what the future may bring.

In 1998, the City of Encinitas hired a consulting firm to study the Highway 101 corridor from Seaside State Beach to the inlet of San Elijo Lagoon. The goal was to lessen the extensive erosion that was occurring along the highway and reduce the number of road closures caused by waves pushing cobbles onto the highway during high tides. The consultants came back with a recommendation to build a seawall from Seaside State Beach to the lagoon's inlet at Cardiff Reef. That plan would have continued the armoring of the coastline and would have permanently prevented the opportunity to improve the location of the inlet to the lagoon. The Surfrider Foundation and the conservancy approached elected officials from the City of Encinitas and suggested an alternative to this

proposal that would restore the lagoon system and reconnect the sediment transport from the watershed which is currently being trapped in the lagoon. The city liked the concept and decided to conduct additional studies.

A second consulting firm was hired to evaluate the project and began some of the baseline studies that would be needed. The Army Corps of Engineers (ACOE) was asked by the city to evaluate the project and determine whether there was a federal interest, which would have opened the project up to federal funding. A determination was made by the ACOE that there was indeed a federal interest and that we could move to the feasibility stage with a cost sharing agreement between the City of Solana Beach, the City of Encinitas, and the ACOE. During this stage the conservancy was selected to create the baseline biological report—the first time the ACOE ever used a non-profit organization for a study. In addition to the baseline biological report, this stage of the project also included hydrologic modeling and analyses conducted by the consulting firm, Coastal Environments. Several restoration alternatives were chosen and we were then ready to move to the next phase: the completion of the environmental document called an Environmental Impact Statement (EIS). The purpose of the EIS is to



evaluate the environmental benefits and impacts of each restoration alternative. At this time the federal funding dried up and the project was put on hold.

In 2004, the voters of San Diego passed the Transnet ordinance which continued a half cent sales tax to support the transportation needs of the county. Along with the funds needed to construct transportation projects came roughly \$880 million dollars for the mitigation of the environmental impacts they would create. One of the key transportation projects is the widening of Interstate 5. Given that the interstate is a major hydrologic block to the lagoon we saw an opportunity to get the restoration project back on the table. The City of Encinitas and the conservancy began discussing the possibility of restoring the lagoon as mitigation for the widening of the interstate with Cal-Trans and the San Diego Association of Governments (SANDAG). They have shown an interest in our project and have been working with us to complete a “gaps analysis,” which will determine what still needs to be done to complete the environmental documentation for the restoration plan, and estimate the associated cost and the timeline. No assurances or agreements have been made that they will invest in this project, nor has the Environmental Impact Report been released for the interstate widening project.

In 2007, the conservancy filed an application to include the lagoon restoration project in the Southern California Wetlands Recovery Project work plan. The project was approved in November with an approximate project cost of \$120 million. The significance of this is that our project is now eligible for critical gap funding to help complete the necessary tasks for the environmental document and initial construction documents. Again, there is no guarantee that the project will be funded, but we are now one step closer.

A final picture of what the lagoon will look like after the completion of the restoration project cannot be drawn yet because the alternative analysis has not been conducted and the EIR/S is not complete. What I can say is that the conservancy's goals for the project are as follows:

- Existing habitat ratios will not be significantly altered
- Intertidal mudflat habitat (which is limited in Southern California) will be given priority
- Impacts on tidal flow caused by infrastructure will be removed or reduced (i.e., the levee in the east basin, Interstate 5, the railroad berm, and Highway 101)
- Stream sediment flows to the ocean will be restored through an unrestricted inlet and better lagoon circulation.

The conservancy will also ensure that the public's voice is heard and that the decision regarding the preferred alternative will be reached based on scientific data and a concern for what is best for the community and the ecological reserve. Large scale restoration projects of this kind take an average of 15–20 years to reach the implementation phase. Currently, we are on track to hit this target—assuming that funding from either mitigation contributions or bond financing becomes available to implement the project. The conservancy's involvement is crucial to the overall success of the project. We sincerely appreciate your support, because without it, restoration of the lagoon would not be possible. ❖

Welcome Barry Lindgren

SELC's new Water Quality Specialist



Barry Lindgren started working for San Elijo Lagoon Conservancy as a volunteer in 2003 and now is employed fulltime as water quality specialist overseeing the stream flow gauges in the watershed and conducting water quality measurements in the lagoon. With over 22 years of experience in marketing and management, co-founder of a local instrument company and a past president of San Diego Stream Team, Barry is well equipped to manage the water quality program at San Elijo Lagoon. Barry is familiar with many of the watersheds in San Diego County having worked on the Carlsbad Watershed Program. He has a degree in Physics from the University of California, San Diego and a certificate in California Water Management and Ecosystem Restoration from the University of CA, Berkeley. SELC is very pleased to have Barry on the team.

Goodbye Maryanne

At this juncture, I'm pulled in opposite directions. I'm tempted to step away without a ripple, like walking along a path, leaving nothing behind. But that doesn't work in an office of files, deadlines, and procedures. So I've spent some time putting things in order. And I wanted everyone to know how much I cherish the time I spent working with San Elijo Lagoon Conservancy and how much I appreciate the people I've worked with and the friendships that formed and the challenges met. I felt the satisfaction of doing work that comes from an honest endeavor to somehow improve our world.

My favorite times were out on the trails, brushing against sagebrush, smelling the marsh, hearing the bird songs and calls, and always rewarded with a surprise—deer swimming, clapper rail among prickly pear, rattlesnake in the grass, sand wasps tending their burrows, fiddler crabs waving for mates, blue belly munching on ants, thousands of swarming tree swallows, thousands of congregating elegant terns.

It's impossible to leave without a disturbance. As all decisions require cutting off from one path and taking another, the leaving can feel sharp. But in this case the path taken was worthwhile and the next one is to be seen.

Happy trails,
Maryanne Bache



Searching for the Unseen By Wayne Green

Understanding and Conserving San Elijo Lagoon through Genomics

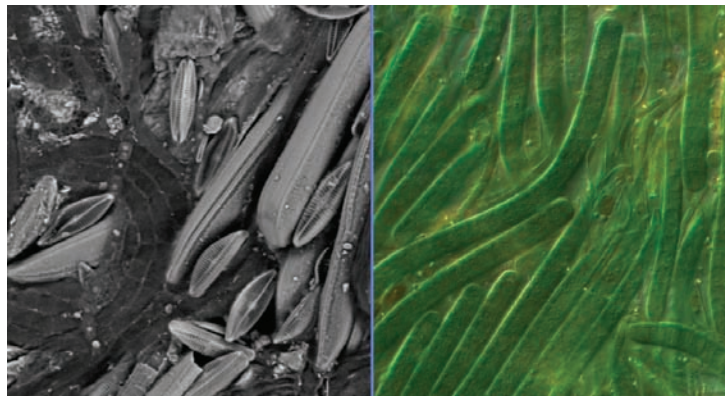
The San Elijo Lagoon, located in a world biodiversity hotspot, is a great resource for nature lovers and outdoor enthusiasts. Many people are drawn to the lagoon's natural beauty and come to admire and photograph the wildlife that finds refuge in this urban environment. While the birds, fish and plants are beautiful, one of the lagoon's most important, life-sustaining resources are the unseen microscopic organisms living there. To help conserve this oasis of biodiversity the San Elijo Lagoon Conservancy has teamed up with Synthetic Genomics, Inc., a privately held, La Jolla-based company developing genomic-driven solutions to address energy and environmental issues, to discover and better understand the microorganisms living in the lagoon.

The lagoon supports biodiversity in an urban environment with diverse habitats ranging from estuary to coastal desert. Within these environments, unique biodiversity can be found at the microscopic level. Microorganisms play a key role in nutrient cycling; however, many of these microorganisms, and the roles they play, are unknown. This is because fewer than 99% of the microorganisms present in nature are able to be cultured or reproduced in a laboratory. By applying the tools of genomics to sequence DNA, scientists can better understand what organisms are living in the lagoon and how they impact that environment.

"Synthetic Genomics is helping us to better understand the lagoon and its role as an island of nature surrounded by an urban environment, by elucidating the vast unseen world of microbes living there. This project is fundamental to sustaining and improving the long term health of the lagoon," said Doug Gibson, Executive Director of the San Elijo Lagoon Conservancy.

Scientists at Synthetic Genomics have been wading knee-deep in some of the lagoon's most precarious waters to retrieve small samples which are then brought to the company's research facilities on Torrey Mesa in La Jolla. There, DNA is extracted from microorganisms present in the samples. This DNA represents a pool of genomes, (all genetic information in an organism, and can be referred to as the metagenome or metagenomic DNA). Using DNA sequencers, this DNA can be read one base pair or letter at a time, A T G C G T C A G, etc, and is digitized into a computer. The metagenome is like a library of books and the DNA sequencer is the scanner. Once the samples are digitized, scientists can use computer search tools to discover and understand the microbes living in the lagoon.

Synthetic Genomics is applying both natural and synthetic biological approaches to unlock the potential of plants and microbial resources for the development of commercial solutions for a cleaner and more sustainable future. The company is also working to minimize its impact on the environment through innovative waste reduction strategies and employee education programs, and working with organizations, like the San Elijo Lagoon Conservancy, to conserve biological diversity. ❖



The diversity present in one scoop from the lagoon is stunning. Pictured above are a scanning electron micrograph (left) and a light micrograph (right) of the top layer of a bacterial mat. Many different types of photosynthetic microbes, organisms that harvest energy from the sun, can be seen. These same microorganisms could be utilized to convert greenhouse gases to advanced biofuels.

Below, students help revegetate the berm of the old sewage settling ponds, the same area where the genomics samples were taken.



President's Council

By Andy Mauro, SELC Board President

Back in 2002, a small group of people were invited to a special meeting at the home of conservancy supporters Jack and Patty Queen. We wanted to explore ways to provide for the organization's future financial stability, and gathering ideas and support from several of our major donors seemed like a good place to start. As I presented our vision of expanding the reserve with new land acquisitions and improving the reserve with a series of habitat enhancement projects, I could tell by the encouraging smiles that everyone was sympathetic to the cause. But I'm not a salesman, and I had no idea how to close the deal. That's when a couple of our more experienced supporters took over and bled me out.

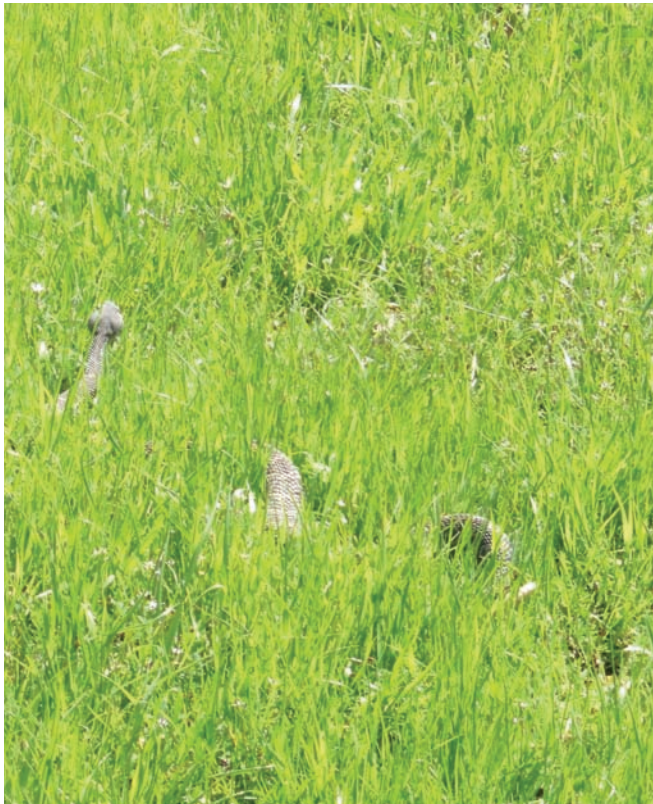
John Seiber is no novice when it comes to hearing a philanthropic pitch. He and his wife Pat support many worthy causes. John quickly endorsed the idea of creating a special financial support group for the conservancy, to be called the President's Council. He recommended that the money raised each year from President Council member donations be placed in a Rancho Santa Fe Foundation operating endowment to be established on behalf of the conservancy. By the end of the evening, the group agreed to a \$1,000 minimum annual donation for members of the new President's Council.



Why is this important? The San Elijo Lagoon Conservancy is a tremendously successful organization, doing wonderful things to preserve a slice of the natural world that still remains here in the middle of our community. General membership donations go to support the annual budget. But we all know that costs are on the rise, future projects will carry a hefty price tag, and it is always prudent to save for a rainy day. Members of the President's Council help provide that safeguard for a financially secure future. Their commitment to grow the conservancy's operating endowment reflects their desire to ensure that the conservancy will always be around to do its good work to preserve our natural heritage. How are we doing? Since that fateful evening a little over five years ago, the conservancy's operating endowment has grown to nearly \$680,000.

John is the newly elected chair of the President's Council, and an ex-officio member of the Conservancy Board of Directors. He has set a robust agenda for the President's Council for 2008—announcing a campaign to increase membership, establish a \$25,000 matching fund pledge, increasing total donations from members, and lobbying the Board to increase the conservancy's contributions to the endowment. John's aggressive proposals would result in a \$100,000 increase in the endowment in 2008, giving us a good head start on reaching the President's Council's goal of an operating endowment of \$1 million by the year 2010.

The President's Council is a dynamic group and my fundraising right arm. If you're interested in learning more and becoming a member please contact the conservancy's director of development, Elaine Dodge, at 760 436-3944. ♦



ATTN: PHOTOGRAPHERS AND ARTISTS SUBMISSIONS NOW BEING ACCEPTED

Deadline For All Submissions: July 1, 2008

*Heather KiNCH Studio & San Diego Parks & Recreation
are now accepting submissions from photographers and artists
interested in donating their images for potential exhibit in
the new Nature Center at San Elijo Lagoon.*

**Looking primarily for photographs, but also
reviewing drawings and paintings of the lagoon's:**

- *birds, indigenous and migratory*
- *animals*
- *flora and fauna*
- *sweeping landscapes*

Submissions: wings@heatherkinchstudio.com

Format: jpg; file size 1MB or less; must be able and willing to provide 250-350 dpi tif file if image(s) selected for display

Include: full name; address; cell phone; email

Indicate: if willing to accommodate specific requests

Notification: status of submissions by July 31, 2008

RECENT DEVELOPMENTS

Ways of Giving

By Elaine Dodge, Development Director

Gifts to Our Annual Campaign

Week in and week out, staff of the conservancy are hard at work preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve. From water quality monitoring to invasive plant species removal to children's education programs, we do what's needed to assure that a healthy lagoon will be there for everyone's benefit. But this work isn't possible without your financial support. In order to fund our 2008 programs we need your help. Here's how—

Annual Membership

Many of you will be receiving your annual membership renewal letter in the mail this month. Our membership system is the backbone of support for our organization. If you receive a membership renewal letter it means it has been at least 12 months since you last renewed your membership. Renewing your membership is your way of assuring your basic level of commitment and support to the reserve.

Monthly Giving

A new Monthly Giving option has been created as a convenient way for you to support the conservancy throughout the year. Each time you walk in the reserve you will know that your ongoing support is helping with the monthly financial needs of the conservancy. When you sign up for Monthly Giving, your credit card will be charged each month for the amount you designate. The minimum monthly donation is \$15. For more information, call Debby Strauss at the conservancy office or go on-line to www.sanelijo.org and download the authorization form.

Appreciated Stock

The conservancy can accept gifts of appreciated stock. Donors in turn receive significant tax benefits by 1) avoiding the capital gains tax that would otherwise be due on the sale of the stock and 2) getting a charitable deduction for its appreciated value.

Tax Rebate

Next month, the federal government will begin sending out special one-time rebate checks to all taxpayers in amounts ranging from \$600 to \$1,200. Consider donating your rebate to the San Elijo Lagoon Conservancy as your contribution to local land conservation.





Photo taken by Lou Adamo on March 2, 2008 from the viewpoint off Santa Carina trail, San Elijo Lagoon

Gifts to Our Endowment Fund

The conservancy has established an operating endowment fund to ensure the perpetual protection of the reserve. The fund assets are maintained at the Rancho Santa Fe Foundation and The San Diego Foundation where they are carefully and professionally invested. Contributions to our endowment secure not only the future of the reserve, but your personal legacy as well.

Contributions to the operating endowment are often made in the form of a planned or deferred gift that is provided for in the donor's will or other estate documents. Donors who make a deferred gift to the conservancy become members of our Legacy Circle. Legacy Circle members receive special benefits such as private tours and picnics in the reserve and invitations to our annual major donor reception. Planned gifts may be made in many different forms.

Gifts by Will or Trust Agreement

Donors can make a gift of cash or property by naming the conservancy as a beneficiary in their will or trust. This technique can reduce estate tax upon the death of the donor. Long-time conservancy members Art and Sandy Yayanos recently revised their family trust agreement to include the conservancy among their bequests. Sandy is also a docent and volunteer.

Charitable Remainder Trust

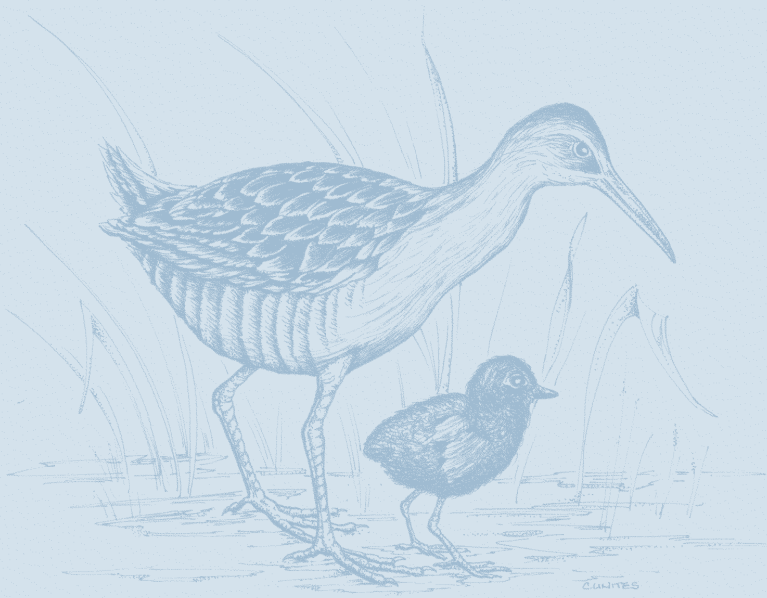
Appreciated assets can be placed in a Charitable Remainder Trust, sold and the proceeds reinvested without realizing capital gains. The donor receives a payment for their lifetime or a specific term, after which the assets are donated to the conservancy. Benefits can include an income tax deduction and an estate tax deduction. Members Peter and Marge Kohl have named the conservancy in their charitable remainder trust making them legacy circle members. Peter recently joined our President's Council to help raise additional support for our endowment.

Charitable Gift Annuity

A charitable gift annuity creates an annuity payment to the donor and a remainder payment to the conservancy. Conservancy board president Andy Mauro and his wife Kathy are in the process of setting up a charitable gift annuity.

Memorial Gifts

Ilse Epprecht has donated to the conservancy in honor of her late husband Walter Epprecht. These funds from the Walter Epprecht memorial will be added to the conservancy operating endowment at the Rancho Santa Fe Foundation.



Errata

Three of our treasured members were inadvertently left off our last newsletter where we recognized our 2007 donors. Mike and Dawn House are members of our President's Council and donated at the California Brown Pelican level. Daniel Powell has been a member since 2001 and donated at the White-tailed Kite level. Thank you!



San Elijo Lagoon CONSERVANCY

Preserving, protecting and enhancing the San Elijo Lagoon Ecological Reserve and its watershed

P. O. Box 230634

Encinitas, California

92023-0634

Change Service Requested

Nonprofit
Organization
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Encinitas, CA
Permit No. 23

Please join us at our annual

San Elijo Lagoon Day

Celebrate with Mother Nature

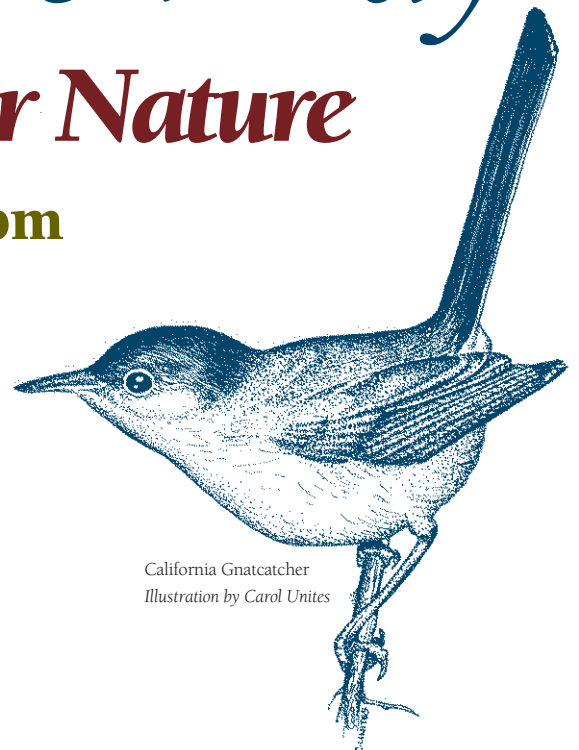
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California Gnatcatcher
Illustration by Carol Unites

For directions visit www.sanelijo.org