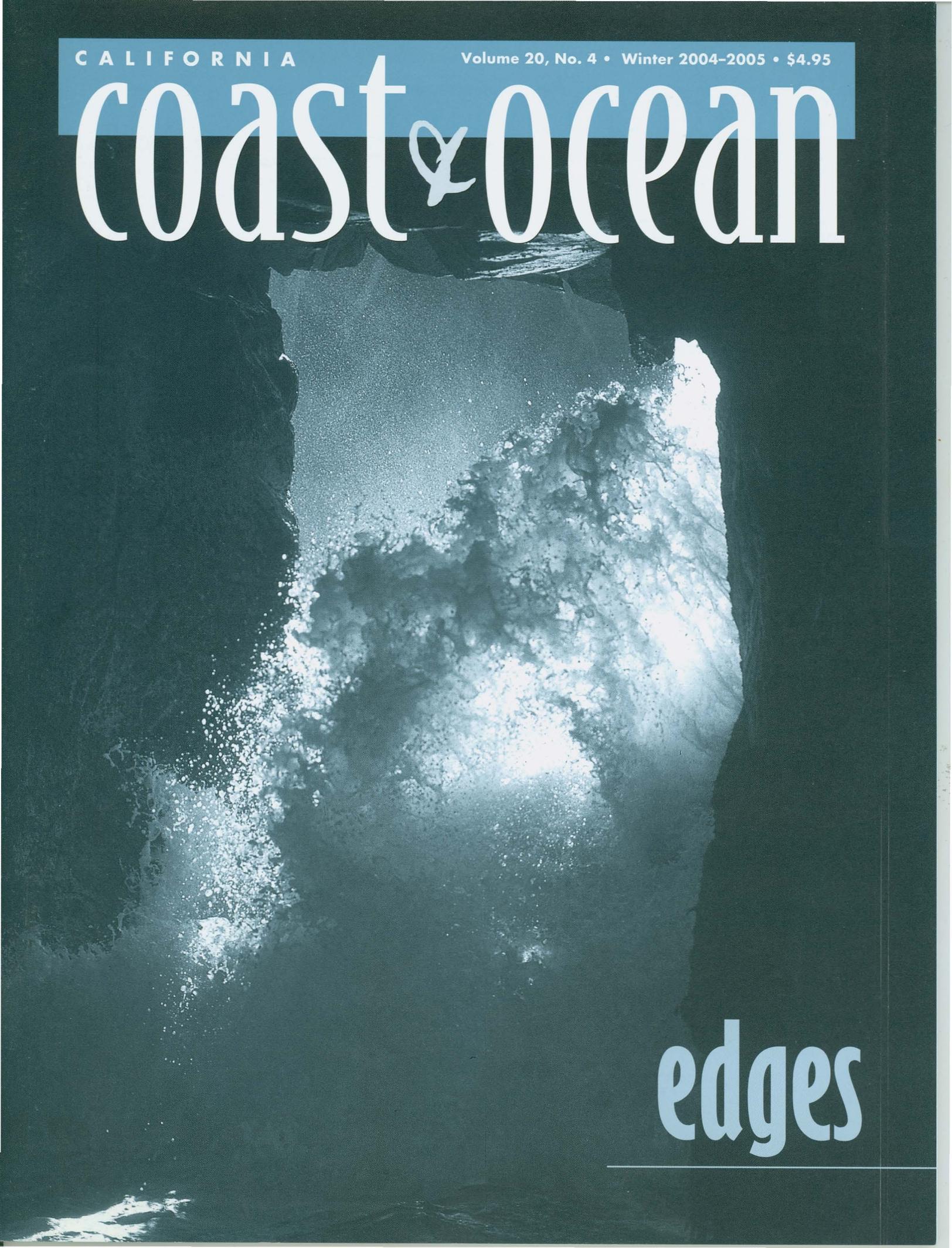


CALIFORNIA

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coast & ocean



edges

NEW C&O WEB SITE

By the time you receive this issue, the new *Coast & Ocean* web site should be up and running at www.coastandocean.org. It will be under construction for a while as we gradually add features. Check it out—we hope you'll like it!

Our web edition includes most of the articles from the current print edition (some abridged), some color images, back issues, and supplemental information.

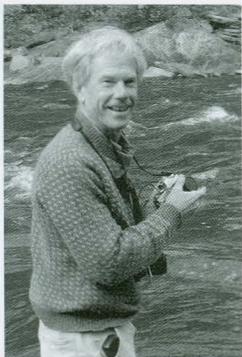
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Cover photo: Pfeiffer Beach, Big Sur. Among Tim Palmer's 16 books is *Pacific High: Adventures in the Coast Ranges*, Island Press, 2002. It tells the story of a nine-month trip from Baja California to Alaska. On pp. 26-30 we feature photographs from his latest book, *California Wild*. For a glimpse of what they are like in color, see www.coastandocean.org.

Back cover: Rocks at Salt Point,
by Bennett Barthelemy

CALIFORNIA COAST & OCEAN

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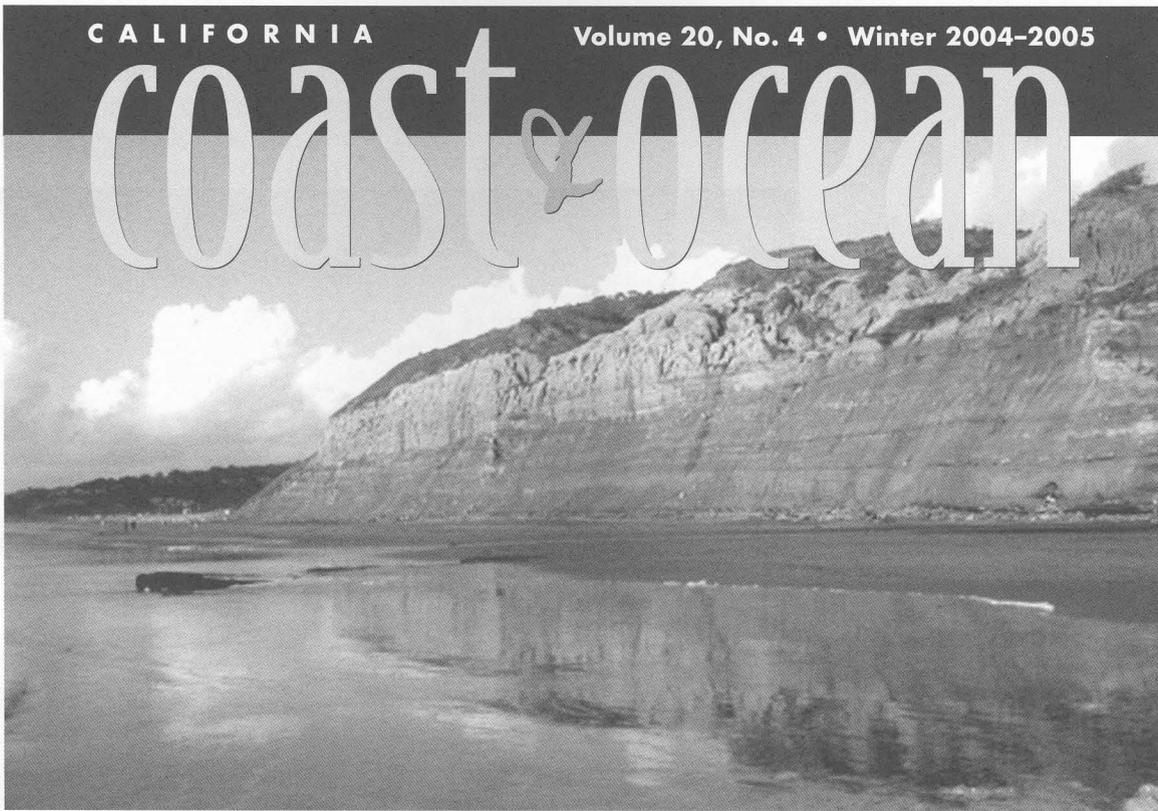
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Coast & Ocean

WESLEY FARMER



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Fortunately, California remains a native landscape, including countrysides that lie either rock-solid or trembling under the force of earthquakes, along with water that pulses in rivers or foams ashore as the Pacific. It includes the atmosphere that whispers from above and sometimes storms down on us, fearsome but life-affirming. Altogether it's an extravagant place, incomparable on the face of the globe. And beyond everything that may seem typical or dominant, beyond everything that may seem passionately appealing or outrageously distasteful about the place and the culture, California is still wild.

—Tim Palmer



FOR YEARS I'VE BEEN searching for a word that might replace "environment," as that term is commonly used, to designate vital issues of concern to us all. The word is outdated, misleading, and divisive. It creates conflict and blocks the way to recognition of essential needs we all hold in common.

People who share an active concern about the quality of air, water, soil, and other aspects of our planetary life-sustaining system tend to be called "environmentalists." In the media they are usually pitted against people who talk of "the economy," which includes the state of the stock market, the gross national product, employment (as opposed to working and making a living), or prices of goods that are produced, exchanged for money, and consumed. People who focus on these matters are not usually identified by a single label. They are "business leaders," "business and industry," and "consumers" (rather than citizens). By and large, they are perceived as more realistic, their interests as more important than those of "environmentalists." Whereas people who contend that ancient redwood trees and animals of other than our own species have a right to live are often seen as "extremists," I don't recall ever hearing that pejorative applied to a corporate CEO, no matter how destructive of the common good his behavior might be.

The economy is the nitty-gritty, and the environment, much as we love it, can come later, if we can afford it: all too often, that's what it comes down to, because of this dualistic way of thinking. Yet there is no way to separate the air, water, land and ocean from our personal health and well-being. How can we explain the huge increase in asthma in California's children? In that context, clean air is not a frivolous issue. What about those toxic fish in the ocean? How did they get that way, and what do we do now? It may not be obvious why we



BENNETT BARTHELEMY

need redwood forests or spotted owls or red-legged frogs, but the evidence is becoming ever clearer that everything is interdependent—including us.

There can be no one-word substitute for the word "environment," I have concluded, because we are inseparable from it. The boundaries between us and all else are permeable and often illusory. If the natural systems we live in are degraded, so are we, in body, mind, and spirit. Recognizing that is a first step toward doing what must be done, which is to look at things clearly and specifically and seek out the interconnections, which lead not only to everything around us but also everything inside us. If we let go of abstractions that obfuscate reality, we may discover that we can see and sense and understand much that has been wrenchingly difficult to grasp. Help in making this perceptual shift is available from science, philosophy, poetry, music, and the visual arts.

The essential lesson is beautifully clear in *Spring, Summer, Autumn, Winter, Spring*, a film written and directed by Ki-duk Kim and recently shown in

some California theaters. A monk and a child he is raising live in a temple floating on a lake surrounded by mountains in Korea. One day the boy captures a fish, a frog, and a snake, ties a stone to each with a string, and releases them. He laughs as he watches them struggle. The monk sees all this but says nothing. That night the monk places a stone on the back of the sleeping child and binds it to him by wrapping a rope around his body at the level of his heart. When the boy wakes and complains, the monk tells him to go find the three animals, warning that if any of them is dead, the boy will carry a stone in his heart all his life. This extraordinary film is a parable for our time.

In the 1970s we discovered we had an environment and were warned by a cartoon character, Pogo, that "we have met the enemy and he is us." In the year 2005, all of us on this beautiful planet carry stones in our hearts. It is not too late to rejoin the planetary community.

—Rasa Gustaitis

Despite a long and depressing history of property losses, individuals and governmental agencies keep building things in one of Nature's most dynamic environments—the shoreline. When these creations are damaged or destroyed, there is much clamor for more protective structures, but seldom any acknowledgment that anything built in the immediate vicinity of the shore ought to be considered both temporary and expendable.

—Robert M. Norris,
professor emeritus of
geological sciences at the
University of California,
Santa Barbara

Lauren D'Ambrosi's
apartment in Isla Vista

Living on the Edge

ARNO HOLSCHUH

RELAXING WITH A GLASS of good chianti at a neighbor's kitchen table in Malibu, Joe Alibrandi talks of his decision, eight years ago, to build his home along a shoreline that is often under attack from the ocean. With an air of self-confidence befitting a man who has run the missiles and radar division at Raytheon, he readily admits that it was emotion, rather than reason, that inspired his choice. "I have an affinity for the ocean," he says.

ARNO HOLSCHUH

In 1996, when he came to look at a beachfront homesite then on the market, "I stood on that lot and I could see my house—it was like a vision." Memories of his childhood in an apartment overlooking Boston Harbor came alive. Savage Nor'easter storms would batter the city, and afterward he and his brother would go out to collect lobsters from traps washed ashore. "I came home in the evening and told my wife we had to buy the land," he says.

Tuney Alibrandi was initially against the idea. The location was expensive and remote not only from Bel Air, where they were then living, but from fine restaurants, shops, theaters, and airports. But he convinced her.

The lot alone cost more than \$3 million. It is on a small bluff, with stone steps leading down some 10 feet to the beach. Building the spacious home came to considerably more. Although he could have built pretty much anywhere for the price, where else could he have had such a view? From the kitchen of his enormous white house Alibrandi looks out through a wall of windows onto a beautiful (if shrinking) beach framed by Monterey cypress. Pelicans pass by in formation fishing for smelt, a pod of dolphins regularly swims by while he has his morning coffee, and sea lions and seals are recurring actors on this stage. The weather is a perfect 65 degrees in the sun most of the year, and the beach in front of this community is uncrowded compared with other beaches in the area. It is a place of almost

archetypal beauty, the sort of thing you see on postcards.

To be sure, Malibu has a history of natural disasters that regularly damage or destroy homes. Storms took several in recent years, most recently in the 1997–98 El Niño winter. Fires are a more or less regular seasonal hazard; pushed and stoked by the Santa Ana winds originating in the Mojave Desert every fall, they race down canyons to the homes along the beach. In October 1996, a wildfire destroyed or damaged almost one hundred homes along this prized and fragile stretch of coast, between Santa Monica to the south and Point Mugu to the north, and led to a large-scale evacuation. In 2003, more than a thousand firefighters succeeded—just barely—in containing a blaze started by a downed power line. Despite all that, Alibrandi, like many others, feels safe. "The biggest part of [the bluff on which his house sits] is granite. At the edge, there's surface dirt that could slip down, but it's not the kind of slip that could threaten the house, at least not for the next thousand years." He does acknowledge, however: "There's no question, the decision [to build here] was based on emotion."

Which begs the question: Why do so many people desire to build so close to land's edge and willingly pay vast sums for property that may be claimed by the fierce Pacific? Beaches and bluffs along the California coast are eroding, and there's no way to predict exactly when a bluff might fail or a huge storm wave hit. Although some sites are certainly more vulnerable than others, living on the edge can mean a literally diminishing return on a real estate investment.

"Why do we as a people choose to live in beautiful but risky places? Beautiful places are relatively dangerous; the forces that made them beautiful are the same forces that will ultimately destroy them," said Simon Winchester, author of *Krakatoa*, as quoted in a recent interview in the *New York Times Magazine*.

Many coastal homeowners simply close their eyes to hazards, persuading themselves that their particular spot is not at risk. Some bought along the shore without realizing what the risks were, and stayed on because the reasons for doing so were more compelling than reasons for moving away. Still others shrug and say, "Carpe diem."

"The only way to build a home on a piece of eroding coastline and have it exist in perpetuity is to reverse global warming," says Gary Griggs, director of the Institute of

"I hope to be here for the rest of my days," said Barbara Bryant, who loves her blufftop home in Trinidad.



BOB DORAN

Marine Sciences at the University of California, Santa Cruz. "The shore has been marching landward for the last 18,000 years, since the end of the last ice age," he points out, and climate change is speeding up that process. The rate of sea level rise has accelerated, extreme events such as storms are becoming more frequent, and damage to bluffs and beaches from heavy waves has increased. How any particular shoreline or blufftop is affected depends on many variables, including differences in rocks and soil, ocean wave patterns, and the character of the beach.

Rosemary Bauer, widow of a teacher, lives just down the road—or down the beach, if you want to walk—from the Alibrandis. She shares a view with them from the back porch of her modest dark-red cottage, which stands directly on the beach. When she and her husband bought their lot in 1953 for \$4,500 (less than two-tenths of a percent of what the Alibrandis paid 40 years later), there were dunes in her back yard. They are gone now, the beach has been shrinking, and more than once, the ocean has come way too close to her door.

During the 1997–98 El Niño winter, waves washed right up onto her back patio. "We were putting out all these sandbags, and every night they'd wash away," she says. She watched neighbors' belongings bobbing in brine. "We started to see things like a couch and a desk floating down Zuma Beach." Some nearby homes were pulled into the surf.

The Bauers moved to Malibu because Rosemary's husband was from Michigan, where "everybody has a place 'at the lake' where they go on weekends," she explains. "He wanted to live 'at the lake,' but we don't really have any lakes here to speak of." So they made what, to him, was the next-best choice: they bought a home on the ocean. "I told him that you don't *live* at the beach, you *go* to the beach," says Bauer. "But it turned out to be one of the best things we ever did." Not only was it a good place to raise children, it ended up being a good investment. During summer vacations, the family would rent out the house and travel around the country.

Even with the beach shrinking and sea level rising, Bauer could now sell the house at a huge profit. But she lives here, and she chooses to remain. "We have neighbors on two sides, but they do not surround us," she says. "We like the quiet and solitude."



ARNO HOISCHUH



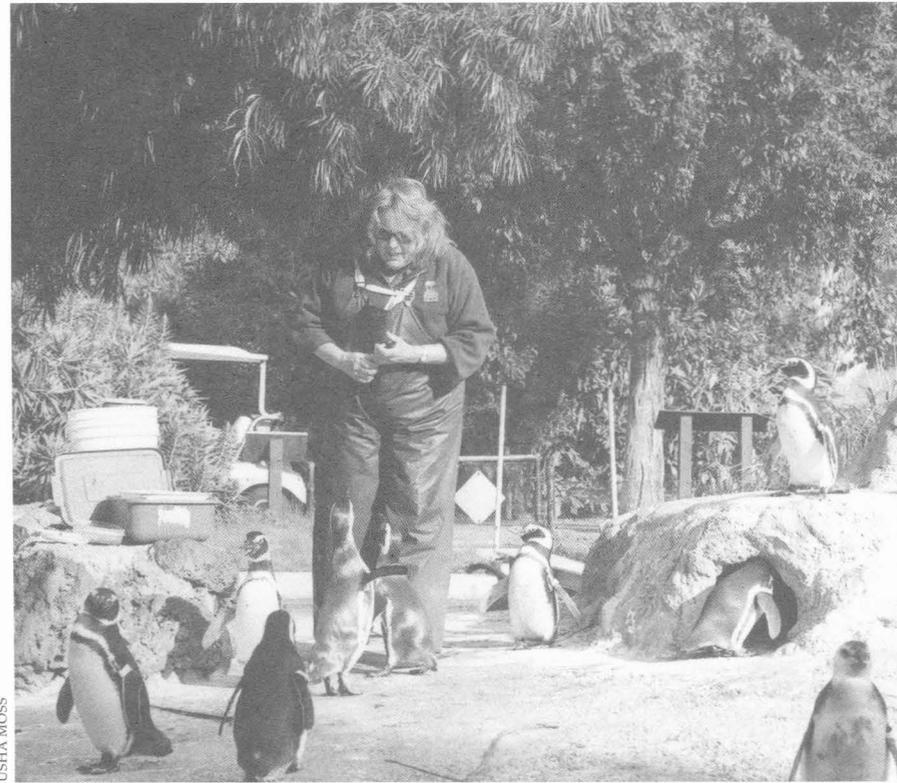
COURTESY ROSEMARY BAUER

According to geologist Robert Norris, reason dictates that "everything along the shore . . . should be considered temporary and expendable." Still, who wouldn't take a little bit of heaven now at the risk of losing it at some unspecified future?

Dave Skelly wouldn't. Skelly, a coastal engineer with GeoSoils, Inc., in Carlsbad, says he knows "better than to buy property on the shoreline and try to build my dream home there." He designs seawalls and bluff stabilization structures for clients whose homes are endangered by coastal erosion. The cost of such shoreline armament can easily run from \$100,000 to \$200,000, he says, and the permits to build them are by no means guaranteed. Because they tend to damage public beaches, the Coastal Commission is highly reluctant to allow them. And even the most costly seawall offers only temporary protection. Eventually, says Skelly, the ocean will take it—which is why Skelly, a surfer, lives inland.

Top: Joe Alibrandi feels safe on a Malibu bluff that is "mostly granite."

Above: Just downcoast, Rosemary Bauer saw high waves wash away sandbags.



USHA MOSS

To Jane Tollini, these penguins are far more important than the house she lost to the ocean. She's worried because some of the zoo's penguins have had the flu.

What, Me Worry?

IN ISLA VISTA, 75 miles up the coast from Malibu, Santa Barbara County condemned several blufftop apartment buildings on La Playa Drive because of bluff failure. Students, many of whom had moved in mere days before, were summarily tossed out and forced to find other lodging in a very tight housing market. The apartment of Lauren D'Ambrosi, a senior at the University of California, Santa Barbara, has a patio that extends to a sheer hundred-foot drop to the beach below. But she did not admit to any anxiety as she sat in the sun within 15 feet of the edge. "We think the landlord has figured out if the building is safe," she said casually.

Unlike Malibu, where residents cherish their solitude, D'Ambrosi's neighborhood is the epicenter of the densest social environment the university town of Isla Vista has to offer. The closer you get to the ocean bluffs, the louder the parties get. "It's great here, lots of fun. There's always something to do," says Rachel Wohlander, a senior who lives in a bluff-edge house. "We just don't think of the possibility of falling into the ocean," says D'Ambrosi.

Que Será Será

MEANWHILE, UP IN Humboldt County in the little town of Trinidad, Barbara Bryant did consider that possibility before she bought a blufftop home 270 feet above the water. She ordered geological studies, but says that she didn't really understand the results. "My feeling is: Whatever will be, will be," she explains. "At first I was in denial, but then I decided I would face that risk in order to have this beauty as part of my life.

"The ocean is very calming," she says. "You can virtually take a bath in it by sitting in a chair and looking at it. It washes over you. When you're up on a bluff, you can see the weather coming in. It might be foggy, but you can see the blue skies and know that fog is going to pass. You can see the gale coming, even when it's just drizzling where you are."

Before moving to Trinidad in 2000, Bryant led a busy life, working at a hotel industry job that had her shuttling between Manhattan Beach and Hong Kong. Hers is a common story on the rural North Coast: She moved there without having a job lined up because she wanted to escape the rat race. She is now Humboldt County's film commissioner, selling pristine beaches and quaint main streets as backdrops for commercials and movies. But when her day is finished, she can come home and let the smell and sound of the ocean wash away the day's trials and tribulations. "When I am in this place, it makes my heart sing," she says. "I hope to be here for the rest of my days."

Dangerous Beauty

FOR ALIBRANDI, Bauer, D'Ambrosi, and Bryant, today's bit of joy is worth accepting certain risks. What happens when the ocean begins to undermine a home, though? A common reaction is to apply for an permit to shore up the bluff or pile rocks between a house and the beach. Each year more seawalls are built, under emergency permits that the California Coastal Act does not allow the Coastal Commission to refuse. Because of the effect of such structures on public beaches, the Commission now tends to require a waiver of the right to an emergency permit as a permit condition for new shoreline structures.

It's a terrible thing to a homeowner when the ocean takes the house, and the tendency is to feel bereft. A few rare souls, however, accept their loss graciously and with élan.

Jane Tollini, who works at the San Francisco Zoo is one of them. Her story started out like many others: She had always wanted to live on the beach. When her boss at the Zoo decided to sell her Pacifica beachside cottage, Tollini bought it.

"I couldn't have been happier; I never got tired of it," she says. The air was clean, the ocean was calming, her garden was beautiful. She was able to open her bathroom window and take moonlit baths while gazing at the waves. Her house was, in a word, paradise.

"Until the sand started giving, that is," she says.

In February 1998 she woke up to find that a chunk of the bluff on which her house was perched had disappeared. That put her off a bit, but "I had the biggest backyard of anyone on the street, 34 feet, so I figured I was the safest."

When reports about potential destructive effects of El Niño started to hit the news, she threw an El Niño party. "Everybody came wearing flotation devices" in case the house fell into the ocean, she says. "We had rubber duckies, water wings, you name it."

Then, on February 22, a knock on her front door got her out of bed. "It was a friend of mine. He suggested I take a look out my bedroom window." When she did, she saw to her surprise that there was no more land there—it had all disappeared, literally overnight.

Tollini called friends to come help her pack. Within four hours, all her belongings were in boxes by the front door. She managed to get everything into storage and moved out, then waited for the big day when her house was to be demolished. "I don't know why I went to watch it," she says. "I don't rubberneck at car accidents." When the heavy machinery approached her beloved house, prepared to smash it, the entire structure just slid down the bluff.

"The thing you have to realize when you live on the ocean is that, sooner or later, Mother Nature is going to win," Tollini says. "Building in a place like that is a foolish investment; I hear people talking about leaving their homes to their grandchildren, but if you live in a home like mine, I'm sorry, it ain't gonna happen."

Tollini knows what so many people would dearly love to forget: Living on the edge is risky. ■

Arno Holschuh last reported on careers in the restoration economy (Coast & Ocean, Autumn 2004.)

LA CONCHITA

CALIFORNIANS got a tragic reminder of just how dangerous it is to live on the coast on January 10, when a mudslide in the little Ventura County town of La Conchita killed 10 people. Residents had been warned: in 1995, a much larger landslide on the same hillside had destroyed nine homes, and geologists cautioned that further landslides were inevitable. Yet residents stayed put. Property values dropped for a while, but quickly rose again into a "normal" range for coastal California, with a modest home costing around \$500,000.

Now, while some residents are finally willing to trade in their piece of coastal paradise for security, others can't wait to get back. A January 14 *Los Angeles Times* story included an interview with Cherie Chako, who was quoted as saying that "if they fixed everything up, I'd be back there tomorrow." This interview was conducted in a hospital, where Chako was recovering from a concussion and broken collarbone she sustained during the landslide.

The Coastal Commission's geologist, Mark Johnsson, said that "it's a virtual certainty that there will be landslides of this size or larger at this location in the future. Geologically speaking, what happened in January is a continuation of what happened in 1995," he said, when 1.7 million cubic yards of hillside slumped off the unstable bluff. Some of that material descended on La Conchita as a debris flow in January but much more could come down, he said. To those who say they don't mind taking the personal risk that comes with living in dangerous places, Johnsson says: "Bear in mind that they are also putting others at risk, including minor children they may have, the postman, the newspaper delivery person—and putting at extreme risk the 600 or so people who were crawling around [trying to rescue people] the minute it happened."

—AH



This was not the first landslide at La Conchita, nor is it likely to be the last.

DAVID L. MAGNEY

TWENTY YEARS OF COASTAL STORIES

WITH THIS ISSUE, this magazine begins its twentieth year of publication. It was launched in winter 1985 as *California Waterfront Age*. As that name suggests, the original intent was primarily to report on the revitalization of urban waterfronts and stimulate ideas on the subject. Don Neuwirth was the founding editor.

Soon, however, the magazine outgrew the name as its coverage expanded, along with its readership. So in 1990, we became *California Coast & Ocean*, to match what we have been trying to do since I became editor in 1986: to bring Californians the information they need to know their coast, enjoy it more, and protect it for future generations of humans and other creatures. We are grateful to the Coastal Conservancy for the opportunity to practice fair and careful journalism as we try to provide in-depth coverage of major conservation issues along the California shoreline, on San Francisco Bay, in coastal watersheds, and offshore.

In this issue and throughout the coming year, we will bring you two special features: In each of our four issues we will look at an urban waterfront, beginning with Oakland, and also briefly revisit some stories we covered during the past two decades. A backward glance reveals that there is much good news to report. The California Coastal Act of 1972, a voter initiative, has proved itself a powerful tool for serving the citizens' will and desire to protect our coast from inappropriate development and other destruction, and to secure public access. Other tools have been created since it was passed and as we learned more about what conservation requires.

In looking back, we can see how modest local initiatives have grown into more encompassing efforts. Two examples are in this issue: Arcata Marsh and the Monterey Bay Aquarium. We also see a shift in baseline assumptions. In 1985, it appeared that

offshore oil development was imminent and inevitable. But Californians fought against it and won. Now there is discussion about what to do with offshore oil platforms that have outlived their uses. At the same time, the prospect of offshore oil development has arisen again.

As everyone who has fought for the coast, as a citizen or a public official, recognizes: to protect what we cherish, we the citizens have to stay alert and engaged.

—Rasa Gustaitis

Updates

TWENTY YEARS AGO

Offshore Oil: Battles Won and Upcoming

"Oil production from discoveries offshore Santa Barbara County is expected to increase from the present 80,000 barrels per day to 500,000 barrels per day by the early 1990s. . . . unless great care is taken, there is reason to fear that the Santa Barbara County coastline's magnificent beauty may be transformed into a sprawling industrial complex over the next several years."

"Must Oil Development Be Ugly?"

Vol. 1, No. 1—Winter 1985

AT A TIME WHEN Santa Barbara County seemed about to experience a huge boom in offshore drilling, William Travis, then deputy director of the California Coastal Commission, suggested that the beauty of the coastline be preserved by making the "inevitable" platforms and onshore processing facilities as aesthetically acceptable and publicly accessible as possible. "A recent Field poll found that the majority of Californians now oppose offshore drilling," Travis wrote. "In dealing

BENNETT BARTHELEMY

with the planning and regulation of energy activities along the California coast, I have found that this opposition is based largely on the widely held perception that offshore platforms are just plain ugly."

Therefore, Travis suggested, the oil industry could "temper the public's negative reaction toward industrial projects in general and oil platforms in particular" by designing facilities that "in addition to being extraordinarily attractive" are also "accessible for tours to offer the public an opportunity to learn how the facility works and why it is necessary."

These suggestions remain largely untested, however, because the expected drilling boom did not materialize. While oil production off Santa Barbara's coast has continued, the peak, reached in 1995, was just 188,000 barrels a day. The coastline remains beautiful, not because an aesthetically enlightened industrial architect created beautiful refineries, but because offshore oil drilling has been so unpopular in California that a bipartisan consensus has continued to restrict it.

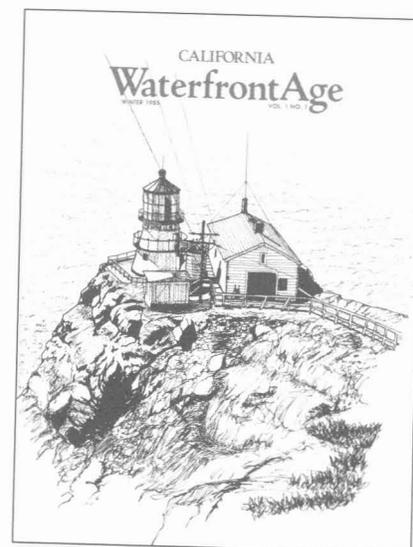
It was the sight of oil-soaked dying birds and marine mammals, rather than design considerations, that moved people in the aftermath of the 1989 *Exxon Valdez* oil spill in Alaska. President George H. W. Bush ordered a ten-year moratorium on oil leasing on much of the outer continental shelf (federally controlled beyond state limits), to begin in 1990. Congress has since upheld that moratorium and, in 1998, President Clinton extended it until 2012.

There is, however, a movement afoot to loosen the ban on new leasing. A group of three Senators (Pete Dominici of New Mexico, Mary Landrieu of Louisiana, and Lamar Alexander of Tennessee) has sent a letter to Secretary of the Interior Gale Norton asking her to allow new studies of potential drilling sites on the outer continental shelf. Energy bills in the last two years (neither of which passed the Senate) also included a plan to inventory reserves in areas currently covered by the moratorium. Congresswoman Lois Capps and Senators Barbara Boxer and Dianne Feinstein, all of California, have been leading opposition to the proposal.

While new oil leases continue to be prohibited, the 36 previously permitted but undeveloped leases off California's coast have become the focus of an intense legal struggle. In 1999, when the lease holders sought an extension to keep them current

without drilling, the Coastal Commission, Governor Davis, and several environmental organizations—with the Environmental Defense Center, a Santa Barbara-based public interest law firm, taking a lead role—filed a lawsuit against the Department of the Interior and six oil companies. The suit contended that the State had the right to review the lease extensions for conformity with California's coastal management program. The U.S. District Court in Oakland found for the State, the Bush administration appealed, and the Ninth Circuit Court of Appeals upheld the District Court decision. In March 2003, the Department of the Interior announced that it will not appeal that decision.

The George W. Bush administration, which bought out offshore leases in Florida, declined to do so at the same time in California. Buyout discussions did begin later, but the federal government and the oil companies are far apart on the price. Linda Krop, chief counsel for the Environmental Defense Center, said "the oil companies are asking for a lot," even though the value of the leases is uncertain. If the Coastal Commission were to determine that oil exploitation under the leases would be inconsistent with coastal protection, the leases would definitely be devalued. But the Coastal Commission can't make that determination until the federal Minerals Management Service (MMS), which oversees oil leases in federal waters, finishes its environmental assessment of the lease extensions. Alison Dettmer, manager of the Coastal Commission's energy and ocean resource development unit, said that the MMS is expected to submit its consistency



Brown pelican



BENNETT BARTHELEMY

determination and environmental analysis to the Commission April 6, and that the Commission will consider it in June. The MMS's analysis is considering not only the environmental impacts of extending the current leases but also the impacts that future exploration and development might have if the extensions were accepted.

Meanwhile, some existing offshore oil platforms have outlived their usefulness. Platform Grace, off the Ventura County coast, is being considered for two possible new uses, both controversial. Crystal Energy, a Texas company, proposes to convert this platform into a liquified natural gas terminal (see *Coast & Ocean*, Autumn 2004), while Hubbs-SeaWorld Research Institute wants to use it for a fish farm.

The question William Travis posed in the first issue of *California WaterfrontAge* 20 years ago, "Must Oil Development Be Ugly?" is still out there for debate. Travis, now executive director of the San Francisco Bay Conservation and Development Commission, has continued to seek aesthetic improvements and public access to shoreline industrial facilities, with scant success. The most notable achievement, he said, was Chevron's decision to paint its oil tanks in Richmond adobe, which makes them look less "alien" to the landscape than they did when painted green, blue, or gray.

Wetland Restoration

"The project evolved into an extraordinarily successful combination of public works, natural resource restoration, and recreational access."

"Arcadian Waterfront"

Volume 1, No. 2—Spring 1985

IN 1980, THE SMALL North Coast city of Arcata had an eyesore on its southern border: an enormous old dump. The saltwater marsh that had been there had been taken over by a sawmill, then filled with trash and garbage. Eventually, the stinking dump was capped with clay and dubbed "Mt. Trashmore" by the locals.

Within the next year, the landfill would be transformed into a flourishing wetland and wildlife sanctuary, and within five years, it would become a model wastewater treatment project as well. Arcata Marsh and Wildlife Sanctuary stands out as an almost singularly successful project.

The transformation was initially driven by Arcata's desire to upgrade its sewage treat-



ARCATA MARSH INTERPRETIVE CENTER

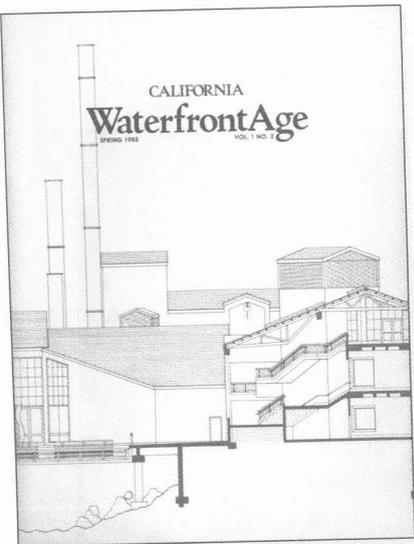
A pond in Arcata Marsh

ment system without hooking into the large regional sewage treatment plant being built in Eureka, nine miles across Humboldt Bay.

Meanwhile, two fisheries biologists at Humboldt State University, George Allen and Bob Gearheart, were experimenting with the idea that salmon fry could flourish in mixtures of seawater and treated wastewater. Thus was born the idea of a marsh fed by treated wastewater, which would support fish and wildlife. The Coastal Conservancy provided \$340,000 for habitat restoration.

Arcata Marsh was opened in 1981 as wildlife habitat and a recreational facility. Five years later, the Integrated Wetland Wastewater Treatment Plant was finished. Soon this little town of 14,000 became a beacon for cities across the country. Recent visitors have included representatives from Venice, Italy, and almost the entire government of the small Pacific island nation of Palau, said Denise Homer, interpretive naturalist for the City of Arcata. "There are about 500 wetland-based wastewater treatment plants in the U.S. by now," she said. Arcata's still stands out, however, because of the educational, economic, and wildlife benefits it has brought to the community. The marsh is managed specifically for wildlife habitat, including an annual removal of marsh pennywort, a native water plant, to allow forage plants for ducks to grow.

The marsh has been expanded from 75 acres in 1981 to 307 acres today. An interpretive visitor center serves as an outdoor classroom for schools and Humboldt State University. The annual number of visitors has increased seven-fold in the last decade, and the Godwit Days festival draws birders from afar who support the economy by staying at local hotels and eating in restaurants. So popular has Arcata Marsh become



that Caltrans has placed an official green sign on Highway 101 to point the way to it.

—Arno Holschuh

Aquarium Aims to Inspire Action

"It was decided that the aquarium would be regional in scope, dedicated to the resources of Monterey Bay and the Central Coast area. So the facility had to interact with its site on the shoreline, and with the bay itself."

"The Aquarium at the End of Cannery Row"

Volume 1, No. 2—Spring 1985

Twenty years ago last November, on the site of a derelict sardine cannery, a state-of-the-art aquarium opened for business on Monterey Bay. With \$50 million and a bushful of ideas, four marine scientists wrought a small miracle that has since grown into the top-ranked aquarium in the nation, according to a recent Zagat survey, and the third most popular family-oriented U.S. attraction, drawing some 1.6 million visitors each year.

From the day the doors opened, improvements have not ceased. The facility has continued to expand, with a new wing devoted to the outer waters of Monterey Bay added in 1996. Currently, the original wing—containing deep reefs, a sandy strand that is home to rehabilitated shorebirds, a touch pool, and numerous smaller exhibits providing an up-close look at bizarre and beautiful creatures—is under renovation, and will reopen later this year with a new name: The Ocean's Edge.

The habitats and organisms of the Bay still have pride of place, but varied exhibits have introduced visitors to specialized themes of marine life, other places in the world and, increasingly, to conservation issues that confront this vast yet mysterious, to us land creatures, part of the planet.

In 1997 the Aquarium refined its mission statement, moving to a concerted effort "to inspire conservation of the oceans." As Jim Covell, director of interpretive programs, says, "We've gone from simply trying to let people experience the marvels of what's out there to trying to get them to take action on the issues that matter. It may sound simple, but it's proved to be a complex job." This effort has various facets, which visitors encounter at every turn. If they go to watch the otters being fed, they will hear how disposable cat litter or garden fertilizer can

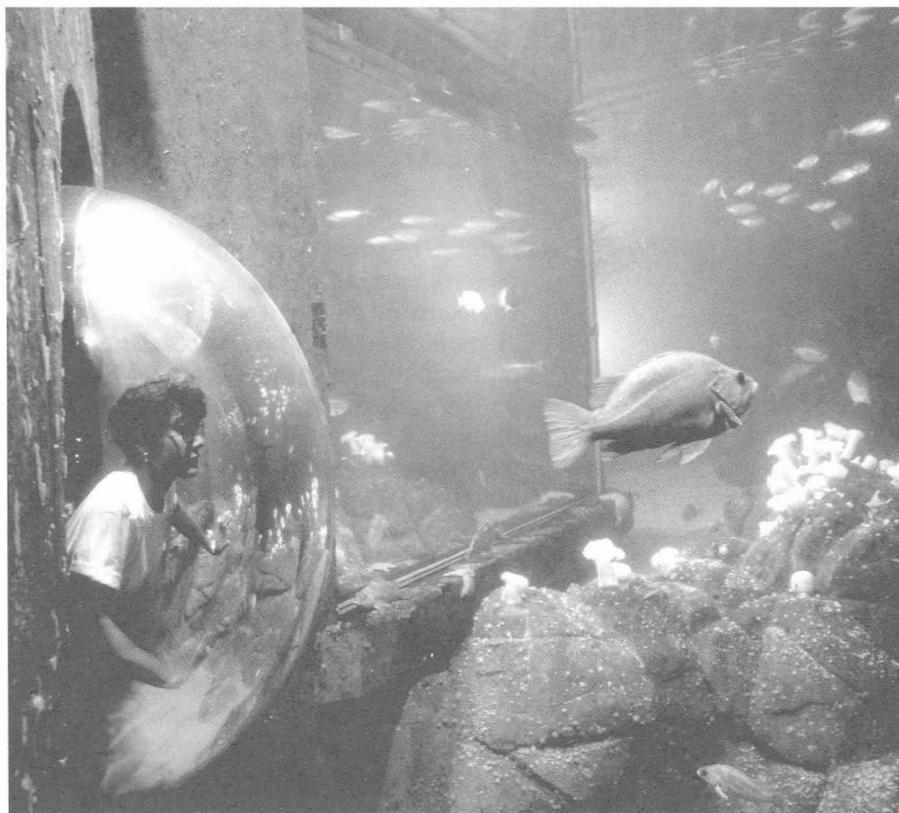
affect these winsome marine mammals. In the Outer Bay wing they can learn how fishing practices impact sea turtles, tuna, and sharks. Why we should look at the label on our glucosamine-chondroitin and vitamin E is explained (they may contain shark byproducts).

One of the most exciting conservation programs at the Aquarium is Seafood Watch. At the Kelp Forest feeding show and an Ocean Action Discovery Station, visitors can pick up a wallet-sized card listing the various fishes that commonly grace our dinner plates, with green, yellow, and red "warning labels" as to the health of each fishery or aquaculture operation. Many are surprised to learn that farm-raised salmon are on the red (do not eat) list, while wild-caught Alaskan salmon are on the green list, or that "dolphin-safe" tuna doesn't necessarily mean that sea turtles, sharks, and albatross are safe from the tuna fleet. Vast amounts of information can also be obtained at the Seafood Watch website: www.mbayaq.org/cr/seafoodwatch.asp.

The Aquarium's more than 400 employees and over 1,000 volunteers are passionate about the ocean, and committed to expanding stewardship of this vast realm. ■

—Anne Canright is a volunteer for the Aquarium's education program

Monterey Bay Aquarium visitors can lean into tanks in these plexi-glass bubbles.



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MALCOLM LUBLINER

Oakland Reshapes its Waterfront

PUBLIC TRUST ISSUES ARISE

TRISH BEALL

ALTHOUGH OAKLAND has 19 miles of shoreline and the fourth-largest port in California, it has not yet succeeded in efforts to revive key areas along the downtown waterfront as many other cities have done. All sorts of barriers have kept residents at a distance, both physically and visually—slow-moving freight trains, roads dead-ending at out-of-bounds port facilities, freeway off-ramps, and forbidding chain-link fences guarding industrial endeavors that are neither clearly active nor obviously abandoned.

While waterfronts from Boston to Baltimore to Long Beach to San Francisco have been transformed with parks, green spaces, and revenue-generating attractions, Oakland has by and large allowed haphazard development for years. When the City

began drafting a general plan in the early 1990s, it did not even include its waterfront until community groups reminded officials that it was there.

A 1993 League of Women Voters report, "The Waterfront: It Touches the World; How Does It Touch Oakland?" sparked a concerted effort to devise a coherent revitalization scenario which in 1999, after many months of discussion, led the City and Port to adopt the Estuary Policy Plan. This plan, now being implemented, applies to the and on the nine-mile channel between Oakland and Alameda known as the Oakland-Alameda Estuary. Much of this land is held by the Port of Oakland, and much of it has fallen into disuse. The plan calls for the creation of new and expanded parks, a waterfront trail, residential development, and a

reinvention of Jack London Square, the never quite commercially successful centerpiece of the downtown waterfront, as a hub for tourism, entertainment, conferences, offices, shopping, and dining. Further goals are to figure out how to deal with the barriers created by the Port's busy high-tech container ship facilities and to link the downtown waterfront to a shoreline recently made accessible by closures of the Oakland Army Base and Navy Supply Depot.

Reflected in the Estuary Plan are visions of various interests who struggled to craft it: port planners; community organizations seeking more parks and green space; groups hoping to restore natural habitats and a visual link between the waterfront and the city; historic preservationists wanting to refurbish old buildings; and developers promising to enlarge the ailing city's tax base.

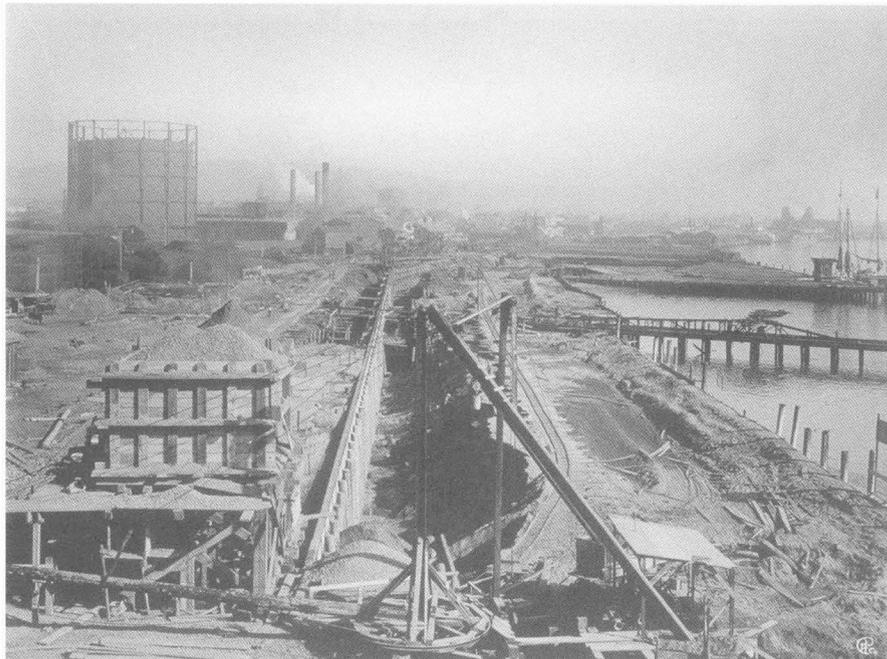
Many of the Port's properties are, by California law, tidal trust lands that are to be held in the public trust and, as a recent State Senate analysis spells out, "are reserved for uses associated with commerce, fishing, navigation, recreation, and the environment."

With specific projects now under way to revitalize lands no longer needed for port activities, tensions among differing interests have again come to the fore, particularly over questions of how the priorities of public recreation and open space will be honored. The Estuary Plan bears the caveat that it is "a dynamic document, subject to change."

Jack London Square— How to Make It Work?

JACK LONDON SQUARE is not really a square; it is an area of about six blocks upon which the name of the Oakland-born writer was bestowed in hope of attracting tourists. Its center is a plaza at the foot of Broadway, the main boulevard running through downtown, but cut off from downtown visually by an elevated freeway and physically several times a day by long freight trains rumbling across Broadway on the tracks that run along the Embarcadero, the Square's inland edge.

Anyone expecting to find a grand civic plaza at Jack London Square will be disappointed. Immediately inside the entrance arch is a valet parking operation that sets a tone of exclusivity and creates a hazard, or at least discomfort, to pedestrians who must



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share space with cars. The view of the Estuary is limited by a hotel on one side and a restaurant on the other. The effect of these buildings is to constrict, rather than define the open space between them.

You have to walk right to the water's edge for an expansive view. To the north, giant white cargo cranes loom against the sky, with the Bay Bridge behind them. When a ship carrying ten stories' worth of containers is docked below them, it seems so close you can almost touch it. Closer in, dwarfed by the cranes, is the Alameda-Oakland-San Francisco ferry landing and, just beyond, a floating maritime museum comprised of the decommissioned Coast Guard lightship *Relief* and Franklin D. Roosevelt's presidential yacht, the *Potomac*. To the south, past boats bobbing in the slips of the marina, another restaurant blocks the view.

For much of Oakland's 153-year history, this area was the only sizable stretch of waterfront that welcomed the public. Here the first Oakland-to-San Francisco ferry service started in the 1850s, and much later (after the Port had wrested legal ownership back from individuals, including Oakland's first mayor, who had grabbed the land), the Port began to lease spaces to businesses that would serve ferry passengers and others. The opening of the Bay Bridge in 1936 put an end to the ferry for 54 years, and this part of the waterfront became a marina and a place of seafood restaurants.

Dredging for a 30-foot deep channel, 1930s

Dashed Promises and Near Misses

THE SCENT OF MONEY wafted through Oakland's waterfront in 1949 when the Burlington, Rio Grande, and Western Pacific railroads inaugurated their jointly run, Vista-Domed California Zephyr passenger train, renowned for its luxury and spectacular views. The Zephyr terminated at Western Pacific's Third Street station in Oakland, a short walk from the waterfront, yet the railroads promoted the train as a Chicago-to-San Francisco run, with nary a mention of Oakland in their colorful brochures. (Today the Third Street tracks are gone, and Amtrak's California Zephyr bypasses Oakland to stop in Emeryville. Its Los Angeles-to-Seattle Coast Starlight and commuter trains to Sacramento and San Jose stop at the Amtrak station on the Embarcadero near Jack London Square.)

In 1951, partly hoping that tourists arriving by train would pause in Oakland before heading to San Francisco by bus, the City and Port dedicated the waterfront at the foot of Broadway as Jack London Square. It then included several popular restaurants, a "boatel," a marina, Heinhold's First and Last Chance Saloon (the actual joint where London did his homework), and many, many parking spaces.

Much as the Bay Bridge killed off ferry service for years, the growth of air travel soon diminished the Zephyr crowds, and for several decades Jack London Square was shunted off the beaten path. A convention hall was built in the 1960s, but few conventions came. In the late 1960s the Port

and the Square's business association sponsored an expedition to the Klondike to bring back the tiny cabin where London had spent a winter, which they plunked down on the pavement near Heinhold's.

Jack London Village, an eclectic jumble of stores and more restaurants, was built in the mid-1970s, but it was cut off from the main Square by another parking lot. It was demolished in 2001. In 1985, a Port redevelopment plan included a "crystal palace

food pavilion," but, whatever that was, it never saw the light of day. The 1993 League of Women Voters report noted that office and retail additions built in the Square in the late 1980s "remained vacant."

In the 1990s Oakland fell into the bleakest of times. Downtown had suffered badly in the 1989 Loma Prieta earthquake, and was further rocked when Macy's bought and immediately closed the city's only department store. Soon after, thousands of jobs evaporated when military bases closed.

Community groups and city planners recognized that the Square and the nearby warehouse district could be keys to revitalizing the city. The potential was evident, as some major retailers had already moved into the area, and a Sunday farmers' market drew crowds that now number in the thousands. A kayak sales and rental business enabled people who didn't own yachts to boat, and restored ferry service to San Francisco, essential after a piece of the Bay Bridge fell and a stretch of freeway collapsed in the 1989 earthquake, became an alternative for commuters. Use of the waterway increased as adult and student rowing teams and the sailing school at Estuary Park became more active. Except on weekends, however, the parks and plazas have remained nearly vacant.

The area around the Square got more attention soon after. The City encouraged new residential and office construction and the conversion of industrial spaces to live-work lofts. Yoshi's, a major jazz club, moved from north Oakland into a renovated building near the Embarcadero, drawing audiences from all over the Bay Area. In 1995 a nine-theater movie complex opened, and restaurants began moving into old warehouses. But ask a family heading from a movie back to the parking garage if they ever go to Jack London Square, and there's a good chance they'll say no. Many hope that new attractions will turn the Square into a more powerful magnet.

A Fresh Start—and Dismay

THE NEXT PHASE of the revitalization project for Jack London Square is now grinding into gear, with an ambitious scope. In 2001 the Port granted the contract for redevelopment of the Square to a partnership: Ellis Partners of San Francisco, and Jim Falaschi, of Transbay Holdings in Oakland,

Farmers' market at Jack London Square



MALCOLM LUBLINER

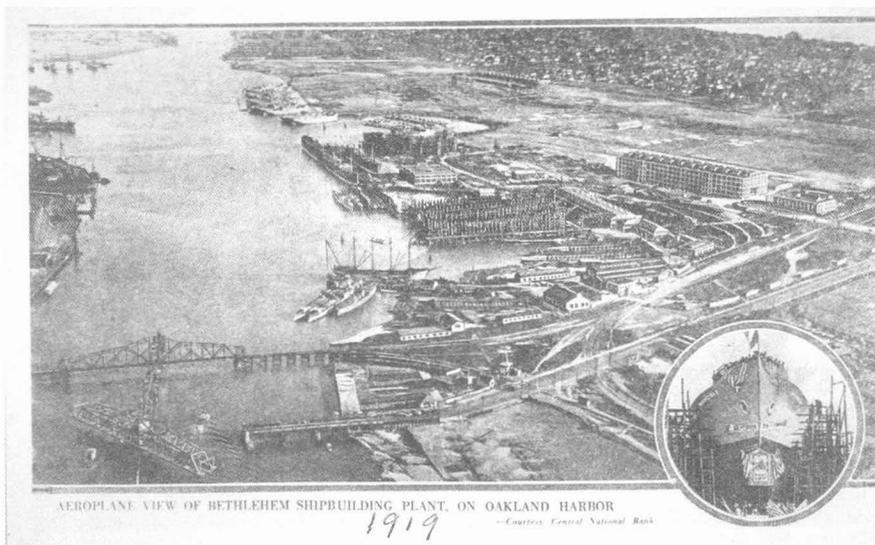
both of which had developed real estate in downtown Oakland, and had established some respect within the community.

When JLS Partners unveiled the detailed site plans and the City issued the draft EIR in late 2003, there was widespread dismay, even though the project included most of the components mentioned in the Estuary Plan. The Sierra Club's Northern Alameda County group decried placement of the Bay Trail inland rather than on the water's edge and charged in its EIR comments that, "The developer of this proposal seems to feel any open space is a vacuum that needs to be filled." The Oakland Heritage Alliance advised that they "rejected completely" a proposal to demolish part of Heinhold's, and also rejected the idea of enclosing it in a large five-story building. Others questioned the size and design of a new eight-story parking structure that would hide the handsome architecture of the new Amtrak station.

The developers examined the community's concerns and responded with some changes. They agreed to restore the Bay Trail to the shoreline, to add several large entryways to the new Harvest Hall building to improve views of the waterfront, to preserve Heinhold's as a freestanding building, and to get community input on a redesign of the parking structure so that it would harmonize with the Amtrak Station.

Gary Knecht, who heads the South of Nimitz Improvement Council and lives in the warehouse district near the Square, had advocated development of the Square as a water-oriented attraction. In his view, the community had its say, but the City and Port got their way. Jack London Square is to be a conglomeration of: a four-star hotel with spa, conference centers, and a restaurant overlooking the water; a two-story ten-theater movie complex; a retail corridor; an office building with its own garage; farmers' market stalls; and the *pièce de résistance*, the five-story California Harvest Hall, dedicated to food, with informal ethnic eateries, formal restaurants, specialty food stands, a cooking school, and offices.

So far, work has begun on one site, at 66 Franklin Street, where a three-story building formerly housing offices and restaurants is being stripped of its 1950s wrappings to reveal the restorable stone façade of a 1920s warehouse. The building's first new tenant is Multivision, a broadcast monitoring service. Next, says Rhonda Hirata, public relations manager of JLS Partners, comes the movie



complex that's expected to be the main draw for Oaklanders. Its construction on a prime site at the foot of Broadway will bring the number of movie screens at the Square to 19. Hirata said that because the box office is on the Square, patrons will be required to enter and see the Square.

Many Oaklanders doubt that the plan will become a spectacular visitor destination, but they wish the developers well. "I'll believe it when I see it," Knecht said.

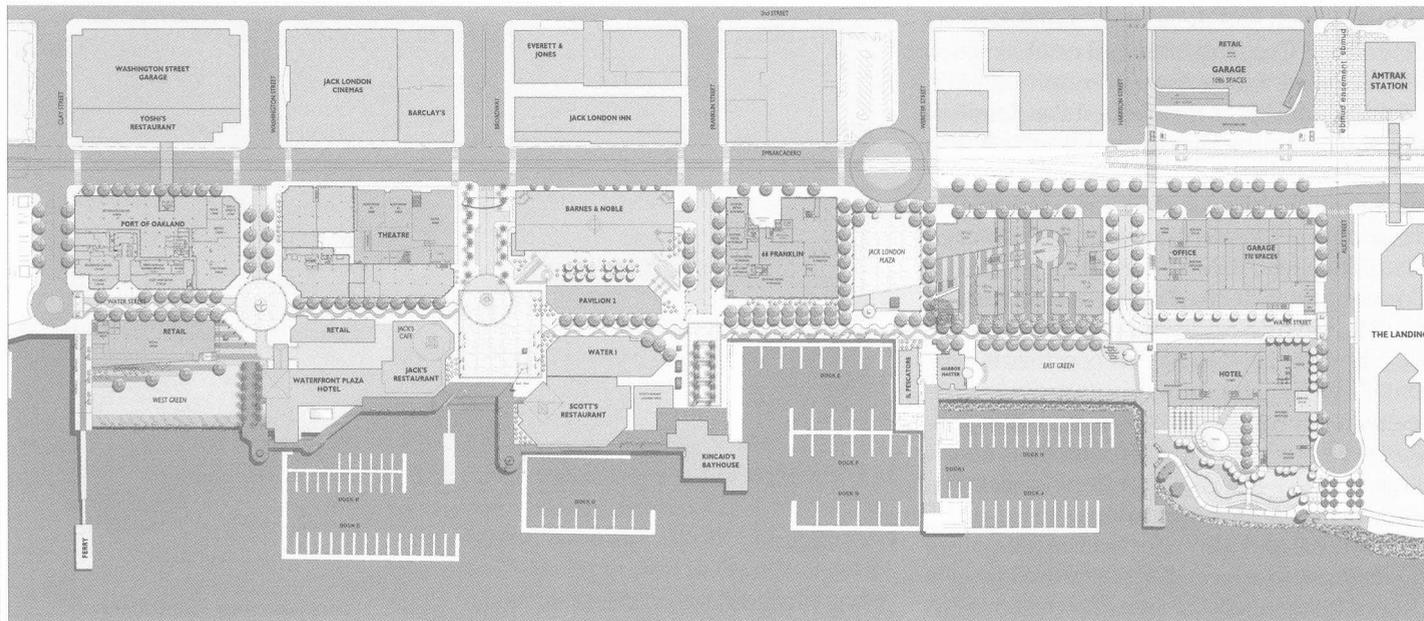
Will Condos Shrink Parks?

SANDRA THRELFALL, head of Waterfront Action, a public access advocacy organization, has acknowledged the immensity of the Jack London Square project, and is focusing her attention on securing more open space and waterfront views southward to a three-quarter-mile stretch known in the City's general plan and the Estuary Plan as Oak-to-Ninth.

Extending from Oak Street, at the southern edge of Jack London Square, to the Port of Oakland's Ninth Avenue Terminal, most of this 62-acre stretch is leased to industrial and business tenants. Here and there are vacant lots or old fenced-in warehouses. In the middle of the stretch where Fifth Avenue ends are some old privately owned two-story wooden buildings where artists have rented workspace and living quarters for decades.

At the Oak Street end is what some open space advocates refer to as Secret Park, although its official name is Estuary Park. You can walk to it from Jack London Square

Airplane view of Bethlehem shipbuilding plant on Oakland harbor, 1919



Top: Jack London Square site plan, July 2004

Above: When housing is too close to public parks or trails, a perception of privatization inhibits public use, says a leading open space advocate.

along the waterfront Bay Trail, but because there is a warehouse on its inland side, someone driving by on the Embarcadero cannot see that it's there, nor are there any signs. It's a delightful spot, with a picnic pavilion, water-view benches, and a broad lawn that's popular with soccer players. Just beyond the warehouse southward, fortunately in plain view, is the new Jack London Aquatic Center, which is rapidly becoming a popular athletic resource for Oakland children who are unlikely to have been involved with the waterfront before. Sculls, kayaks, and small sailboats can be stored and launched there from a wheel-

chair-accessible dock, and a sailing school moors larger boats.

At the other end of this stretch of waterfront, the Ninth Avenue Terminal, a huge warehouse, stands on a wharf. It served the Port of Oakland well in the days before container ships, when smaller freighters handled most cargo, but now is used for storage. A colony of feral cats has made itself at home there, with easy access through at least one broken window. Some architectural preservationists would like to restore the warehouse, which has an Art Deco facade, for a new use, but open-space advocates envision a crescent-shaped waterfront park on the site, as was called for in the Estuary Plan.

Since the early 1900s, the Oak-to-Ninth properties, almost all held by the Port of Oakland, have by law been in public trust—that is, they are public land intended for uses that benefit the public, whether by generating revenue, supporting fisheries, or providing open space. The Estuary Plan called for increased parkland and trails, some sort of eatery, perhaps some entertainment venues and a hotel, but no residences.

Because the Jack London Square development plan has made some of the commercial components of Oak-to-Ninth redundant, citizen groups' interests have turned toward creating large park areas, visible from the Embarcadero and from the parallel I-880 freeway nearby, and clearly inviting the public.

Now, however, condominium projects are being proposed for some of the projected

park areas by Oakland Harbor Partners, an enterprise led by Signature Properties, which the Port selected as master developer for Oak-to-Ninth. The company plans to erect residential buildings ranging from five to 20 stories high, with 3,100 units, as well as some commercial buildings, with 27 acres of open space scattered throughout the area. Condominiums would replace the warehouse that now blocks the view of Estuary Park from the Embarcadero—a site that in the Estuary Plan had been designated for the park's expansion—and would also be built on a large part of the proposed site of the crescent-shaped park at Ninth Street.

In 2001, when the Port issued a solicitation for proposals from developers, it noted that if the developer wanted to include housing, state legislation might be required to allow the port to remove the parcels between Oak and Ninth from the Tidelands Trust in exchange for lands elsewhere. Legislation introduced by now Senate Majority Leader Don Perata of Oakland, and signed by Governor Arnold Schwarzenegger in September 2004, did just that, allowing the Port to sell the Oak-to-Ninth land to a private developer. The legislation does not designate particular exchange parcels but sets priorities—first, land already lying within the Estuary Plan, and second, land contiguous to the area. Other possible exchange parcels would be along the Bay in or near Middle Harbor or Outer Harbor.

Although the Bay Conservation and Development Commission and the State Lands Commission would have to approve such exchanges, open space advocates worry that allowing housing to be built along this stretch of the Estuary will create more barriers that will keep Oaklanders from their waterfront. In Threlfall's opinion, the presence of private housing leads the public to "a perception of privatization" that tends to discourage people from exercising their public access rights. Patrick Van Ness, a project manager for Signature Properties, said these plans are in very early stages, with public hearings and an EIR yet to come. Marge Stanzone, Oakland's city planning project manager for Oak-to-Ninth, said a public outreach effort conducted by consultants was to begin shortly. After community comments are incorporated into the final EIR, the City Council will have final say.

Stanzone described the development plan as "controversial." John Sutter, a former Oakland City Council member and longtime open-space advocate, says: "I do



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think it [the Ninth-to-Oak tract] is public property, it's publicly owned; it was acquired by the public after 75 years of litigation—all stemming basically from a theft by our first mayor—and not to take advantage of this public land for public purposes seems to me a terrible disappointment."

Michael Ghielmetti, vice president of Signature Properties and spokesperson for Oakland Harbor Partners, defends private ownership of the land. He points out that the soil is contaminated and existing infrastructure is inadequate. "An incredible amount of money needs to be put in," he said, to remedy that, to buy the property from the Port, and to "create a lively new waterfront district."

Ten years from now, Oaklanders should know how well these revitalization projects have succeeded in helping the city get back on its feet. If the reasons for regularly visiting Jack London Square and the waterfront are strong enough, people will overcome the physical barriers of freeway, railroad, and working port. Those are not going away any time soon, but many vigilant eyes will be required to make sure no new barriers arise. ■

Trish Beall wrote "LNG for California?" Coast & Ocean, Autumn 2004.

Bird's-eye view of Oakland and vicinity, late 19th century

WHAT IS THE OAKLAND-ALAMEDA ESTUARY?

BEFORE 1869, streams flowed to the Bay through Lake Merritt, which was marshy at low tide, a saltwater lake at high tide. Then Oakland Mayor Samuel Merritt personally funded the building of a dam at 12th Street to create a freshwater lake. (He owned property on it.) That lake, however, soon turned into a fetid swamp, for the streams carried raw sewage. In 1901, to clean up the mess by bringing back some tidal flow to the lake, as well as to create more waterfront for port-reliant industries, the U.S. Army Corps of Engineers dug a channel along the Oakland waterfront. That channel turned the Alameda Peninsula into an island and is now known as the Oakland-Alameda Estuary. It is a highly modified and disturbed estuary.

AN AMAZING NEW PARK

A UNIQUE NEW waterfront park opened in September 2004 two and a half miles northwest of Jack London Square. Middle Harbor Shoreline Park is startling to discover—38 acres of landscaped green space in the midst of the vast industrial landscape of the working port, with dramatic views of port operations and the Bay. Giant white supercranes can be seen loading and unloading container ships at an adjacent marine terminal while ships and tugboats move in and out of the harbor, with San Francisco's downtown skyline in the background. The views are even more expansive from the wheelchair-accessible viewing tower atop a man-made hill.

Historical footprints and maritime artifacts have been built into the landscape in pleasing and intriguing ways, and the architecture is in keeping with the harbor's history. Pathways are demarcated by concrete piles that once held up the piers of

the Navy Supply Center, which served the Pacific Fleet from World War II into the 1990s. A tall open structure with latticed roof replicates the shape and size of an old Navy warehouse.

This park was achieved by creative collaboration among different groups. Port planners and community advisors worked with West Oakland community representatives, open-space activists, the Audubon Society, the city Landmarks Board and others to arrive at the park plan. "We spent the better part of two years working with the neighbors. It was time well-spent," says Jerry Serventi, project manager for the park and now the Port's director of engineering.

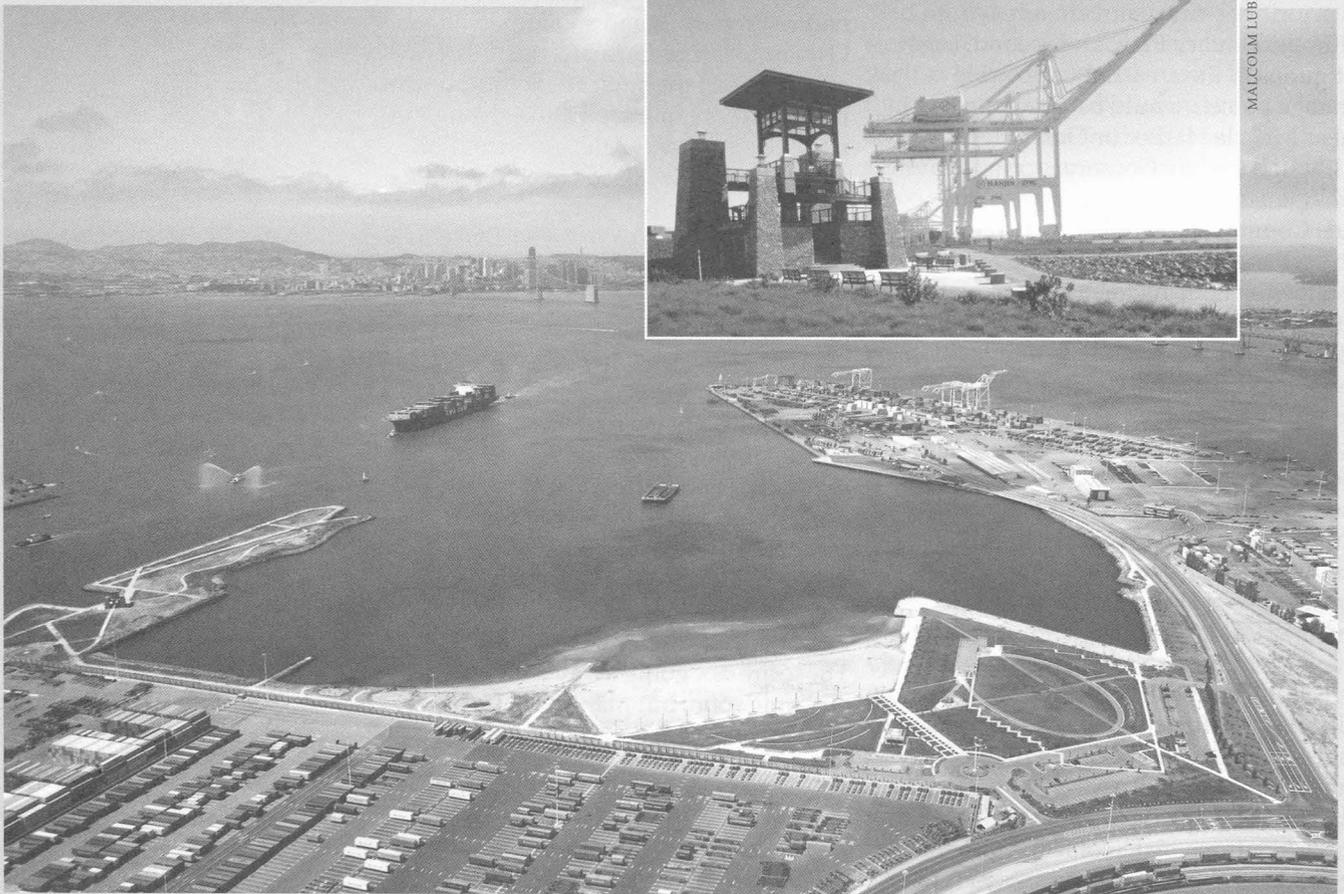
There is more yet to come. The Port is creating a saltmarsh, shallow water habitat, and five-acre beach, using seven million cubic yards of bay bottom dredged from the ship channel to accommodate vessels with 46-foot draft.

This fascinating place is hard to find, however, and visitors have been scarce. (Canada geese have discovered it, though,

attracted by the grass). To get there on wheels isn't easy, on foot even harder. On weekdays a bicyclist or motorist needs nerve to maneuver past huge trucks zipping around to pick up loads or deliver containers. An AC Transit bus, Number 13, runs through West Oakland to the park every hour on weekends only, and connects to BART's West Oakland station.

Jim McGrath, manager of the Port's environmental department, is eager to see the grass-covered amphitheater put to use, but believes that special shuttles may have to be provided, perhaps from Jack London Square. A map on the Port's website shows that trails for bicyclists and pedestrians will be built from West Oakland. Along the shore, the Bay Trail links Middle Harbor Park to nearby Port View Park, where a children's playground has been installed at the foot of a walkway to a recreational fishing pier. Like the 1,220-acre Martin Luther King Jr. Shoreline at Oakland's border with San Leandro, this park is managed by the East Bay Regional Park District.

—TB





MALCOLM LUBLINER

IF YOU TAKE THE FERRY from San Francisco to Oakland—a beautiful ride—you pass under the Bay Bridge and soon enter the Oakland Estuary, a nine-mile channel that links San Francisco Bay with San Leandro Bay. Immediately to your left you'll see a row of towering white cranes reaching out over the water and huge container ships docked beneath them.

The ferry stops at Oakland's Jack London Square, then continues to the last stop, Alameda. Should you proceed further into the Estuary, you would see docks and small-scale boat works along both shores. Some are active and well maintained, others in disrepair or abandoned. This stretch of the Estuary is no longer an integral part of maritime commerce, for it is not accessible to the deep-draft vessels that dock at Oakland, California's fourth-largest port. The bottom is too shallow, the waterway too narrow (averaging 1,000 feet), the drawbridges too slow.

Property along the Estuary's waterfront is now coveted for a variety of new uses, especially residential and commercial, and for public open space and parks. Residential construction is being encouraged by Mayor Jerry Brown, who has pledged to build new multi-unit housing with amenities to entice people to live in the heart of the city. Homes

Creating Open Space

TWO CASES OF CONFLICTS RESOLVED

PAUL STANTON KIBEL

fronting on water can do that, especially if they are near public transit.

Oakland would also like to coax more visitors to its side of the Bay, to its restaurants and hotels, music clubs and shops. The Estuary's waterfront has the potential of being developed for that purpose as well. Visitors to San Francisco's Ferry Building, Crissy Field, and other shoreline landmarks could get across the bay easily via a scenic ferry ride.

Competing with proposals for luxury housing and commercial development, trails and parks are being proposed. Behind the luxury condominiums rising along the water lie some of the city's poorest neighborhoods, which are in dire need of outdoor recreational space.

The Bay Trail runs along the Waterpark Lofts (center) and the Estuary condominiums.

Back in 1888, when Oakland took up a proposal by the renowned landscape architect Frederick Law Olmsted for a “wild-wood” chain of city parks, this was a working waterfront. Parks were created around Lake Merritt, along forested creek-sides, and in the hills, but nobody considered putting green space among busy wharves and docks. Now, with the waterfront available for other uses, the challenge facing the City and Port of Oakland is how to balance a need for revenue-generating development, be it residential or commercial, with the need for open space and parks, and make the Estuary as accessible as possible to the public while acknowledging its maritime history.

In the late 1990s, the City completed the 16th Avenue overcrossing, a road with wide sidewalks, above the railway and freeway to connect the San Antonio and Fruitvale neighborhoods with the waterfront. More overcrossings are planned.

Synergistic Benefits

THE TRANSFORMATION of the Estuary’s waterfront is being shaped by the cumulative impact of many separate site-specific decisions. Plans and regulations, citizen involvement and vigilance are essential during both planning and construction.

Take the case of the Waterpark Lofts condominium project, whose developer violated permit conditions imposed by the San Francisco Bay Conservation and Develop-

ment Commission (BCDC), which regulates shoreline development along the Bay and is legally required to provide public access to the “maximum extent possible.” TJ Enterprises LLC and Todd Dworman built closer to the Bay than the permit allowed, in areas reserved for the Bay Trail. BCDC imposed a penalty of \$90,000 and, to provide the required 32-foot-wide public access, amended the permit to authorize pile-supported bay fill for a boardwalk.

Inevitably, advocates for different uses at particular waterfront sites have clashed and will continue to do so. In two notable instances, however, conflicts have been worked out with synergistic benefits for all concerned. Two waterfront projects that could have become mired in controversy are now under way, at Union Point and along Glascock Street, with broad local support. These projects, and the process by which the conflicts they posed were resolved, can serve as models for builders, communities, and public officials working to revive and rejuvenate urban waterfronts.

At Union Point, a university rowing club, California Crew, sought land that the Spanish-Speaking Unity Council, a nonprofit community redevelopment corporation, wanted for a park with sports fields, green space, and waterfront access. At Glascock Street, a housing developer faced a problem: he wanted to build on three contiguous lots, but the middle one was occupied by the Cal Crew boathouse. Cal Crew wanted to move. The developer got what he wanted by helping Cal Crew to relocate. In both locations,

Bottom left: Coach Ky Ebright, 1951

Bottom right: The original Ebright Boathouse

PHOTOS THIS PAGE: CAL MEDIA RELATIONS



the resolution grew out of long-range city planning processes, effective citizen advocacy, and the creative integration of waterfront public access and private development.

Planning for waterfront revitalization began in the 1990s with the establishment of the Oakland General Plan Congress, a community-wide advisory committee appointed by the mayor. All key entities with stakes and responsibilities on the Estuary were represented: the Port of Oakland, the City of Oakland, BCDC, and a variety of civic, business, and environmental organizations. Much of the waterfront vision they adopted was based on an extensive League of Women Voters study of and report on the Port and Estuary, published in 1993. Financial and technical support came from nonprofit organizations and the Coastal Conservancy.

In 1996, the General Plan Congress produced a report that reaffirmed the commitment of the Port and City of Oakland to the "preservation of industrial areas which are necessary to support Oakland's port," but also advanced a broader vision for the Estuary lands held by the Port: "This area cannot be viewed as a single-purpose district isolated from the city, but rather as a diverse and multifaceted place that connects the city and the bay. . . . A series of individual parks, open spaces, and shoreline access points, connected by a continuous landscaped parkway with promenades, bikeways, and shoreline trails, is recommended."

In June 1999, these recommendations took on more specific shape in the Estuary Policy Plan, developed during 18 months of public hearings and comments. This plan recommended new shoreline open space and trails in the San Antonio-Fruitvale district and a new waterfront park at Union Point, northwest of the Park Street Bridge, which connects Oakland to Alameda. Southwest of the Park Street Bridge, the Estuary Plan proposed that a tract of dilapidated metal sheds on Glascock Street be replaced with small-scale residential buildings. The Estuary Policy Plan helped establish the conceptual land-use framework to make the Union Point and Glascock Street projects possible. Five years on, its recommendations for the San Antonio-Fruitvale District are taking shape.

Union Point Park Emerges

THE NINE ACRES AT UNION POINT, owned and leased to the businesses by the Port of Oakland, had been the site of a boat-building facility, a brass forging shop,



MALCOLM LUBLINER

a lumberyard, and a machine shop, but now were vacant.

In the mid-1990s, Friends of Cal Crew, an organization composed of alumni of University of California Berkeley's rowing club, approached the Port with a proposal to relocate the club's rowing facilities to Union Point from Glascock Street, half a mile away. Friends of Cal Crew had been raising funds to enable the club to expand and upgrade its rowing facilities. The Port was interested, and private negotiations began. As part of this move, Cal Crew was prepared to abandon its existing boathouse and build a new one at the Union Point site.

Meanwhile, the Unity Council was searching for a waterfront site for a new park. When it learned of the private negotiations taking place between the Port and Cal Crew over the Union Point site, the Unity Council moved into political high

"Sigame/FollowMe" is still under wraps at the site of Union Point Park.



The Estuary condominiums under construction, with Waterpark Lofts in the background.

gear. It secured the support of Oakland City Council member Ignacio de la Fuente and other political leaders for its cause. Then, in April 1998, on Earth Day, it sponsored a Union Point walking tour, during which signatures were collected on a petition asking for the park, and buttons were distributed reading: "Union Point Waterfront Park—Let's Dream It! Let's Build It!"

The dream began to move toward reality about five months later, during a design workshop for the proposed park. This workshop, which included a five-hour planning session for local high-school and middle-school students, was organized by the Unity Council and held in conjunction with the City of Oakland, the Port of Oakland, the Coastal Conservancy, the Trust for Public Land, and UC Berkeley's Department of Landscape Architecture and Environmental Planning.

Although Cal Crew's proposed boathouse plan was one of the uses considered, the workshop made it clear that the nearby community envisioned a park that would offer much more than just rowing facilities for university students.

At this time, the Port and City were hard at work on the Estuary Policy Plan. The Unity Council served on the Citizens Advisory Board, representing the concerns of the San Antonio-Fruitvale district. The Plan recommended a park at Union Point with two acres set aside for Cal Crew plus seven acres dedicated to informal field sports, a bicycle path, and a waterfront promenade. Representatives of Friends of Cal Crew collaborated in the design process, intent on securing the two acres

for their club's needs but also recognizing that a neighborhood park would be built around the rowing facilities.

Then, late in the planning process, the Friends of Cal Crew board of directors stepped in with a new demand that soured relations all around. The board insisted that a fence be built in front of the boathouse. This would have prevented public access to the shore. According to Rita Torres, the Unity Council's associate director, Friends of Cal Crew negotiators appeared embarrassed at having to convey and defend the sudden and late demand by the group's board. BCDC objected, saying such a fence would be inconsistent with bayfront public access requirements. The Unity Council pointed out that a fence would result in a waterfront park in which part of the waterfront would be off-limits to the local community. Acrimony escalated to such a point that Cal Crew abandoned its plans for Union Point.

Since Cal Crew's withdrawal, plans for Union Point Park have moved ahead, with support primarily from the Port and City of Oakland, the Coastal Conservancy, and the Bay Trail Project. BCDC provided \$90,000 by assigning the penalties imposed against the developers of Waterpark Lofts for waterfront access improvements at the park.

Union Point Park will have playing fields, picnic areas, interpretive art and sculpture, and a shoreline trail. This park is being built because the Unity Council set a goal and never lost sight of it, because it was skillful in marshaling support, because BCDC enforced its legal mandate to provide waterfront access, and because other public agencies and nonprofit organizations responded.

A Creative Strategy

THE FUTURE OF THE ESTUARY waterfront is being worked out parcel by parcel. What that future will be depends on the vision expressed in planning, the creativity with which land-use conflicts are resolved, and the effectiveness of citizen watchdogs.

In the Bay Trail Project's Oakland Waterfront Trail study, funded by the Coastal Conservancy and published in October 2003, the landscape consulting firm EDAA pointed out that "the Estuary is more like a river. It is linear in form and contained, rather than open and expansive like the broader bay. It creates an environment that is intimate in scale and character." To work

well in this environment, new buildings need to be set within the shoreline's contours and to harmonize with other structures rather than overwhelm them.

A successful example is a 100-unit, two-story residential development called the Estuary, which Signature Properties is now building next to the Waterpark Lofts condos, on Glascock Street. It demonstrates how creative thinking by a developer can lead to synergetic benefits. Signature Properties got what it wanted, contiguity for its project, by meeting Cal Crew's need to relocate. It also won public support by expanding open space next to the required waterfront Bay Trail corridor.

In the past two decades, Signature Properties, headquartered in Pleasanton, has covered many hills and valleys in the East Bay with detached single-family houses. After Mike Ghielmetti, son of founder Jim Ghielmetti, took over as the company's president in 1997, however, the company shifted to urban infill housing, which now represents more than 50 percent of its new project portfolio. Mike Ghielmetti, who lives in San Francisco, perceived a growing market for people with urban inclinations, like himself. Many prospective homebuyers are now looking to urban areas because of quality-of-life issues, such as harrowing commuter traffic. Around 2001, Signature began to plan for a condo development on three contiguous waterfront parcels on Glascock Street. On the middle parcel, however, stood Cal Crew's Ebright Boathouse, a one-story wood-frame building dating back to 1925.

Unless the boathouse was demolished or moved, Signature would have to build separate projects on the two lots flanking the boathouse—an awkward configuration. Although Cal Crew was not particularly against demolishing the building, there was a catch. The City of Oakland Landmarks Board designated the boathouse a historical resource and the Oakland Heritage Alliance, a historic preservation group, was threatening to sue the City if it approved the demolition without first preparing an environmental impact report (EIR). An EIR would delay the project by months if not years.

Ghielmetti proposed a land swap whereby the rowing club would give up rights to the boathouse property in exchange for a larger waterfront parcel along the southeastern edge of the property Signature had purchased. Signature

would pay part of the costs of moving a section of the old boathouse, just the front part of it, to the new site. Cal Crew could then build an additional, bigger boathouse near the water, reserving a shoreline strip for the Bay Trail. Cal Crew approved the deal, as did the Oakland Heritage Alliance and the City of Oakland Landmarks Board. With demolition plans scrapped, no EIR was required.

Signature complied with BCDC permit requirements by dedicating a 45-foot-wide easement along the property's waterfrontage, with a 20-foot-wide walkway along a restored bulkhead and an adjacent 25-foot-wide stretch of lawn sloping up to the residences. Almost 20 percent of the Signature project site has been dedicated to open space and public access.

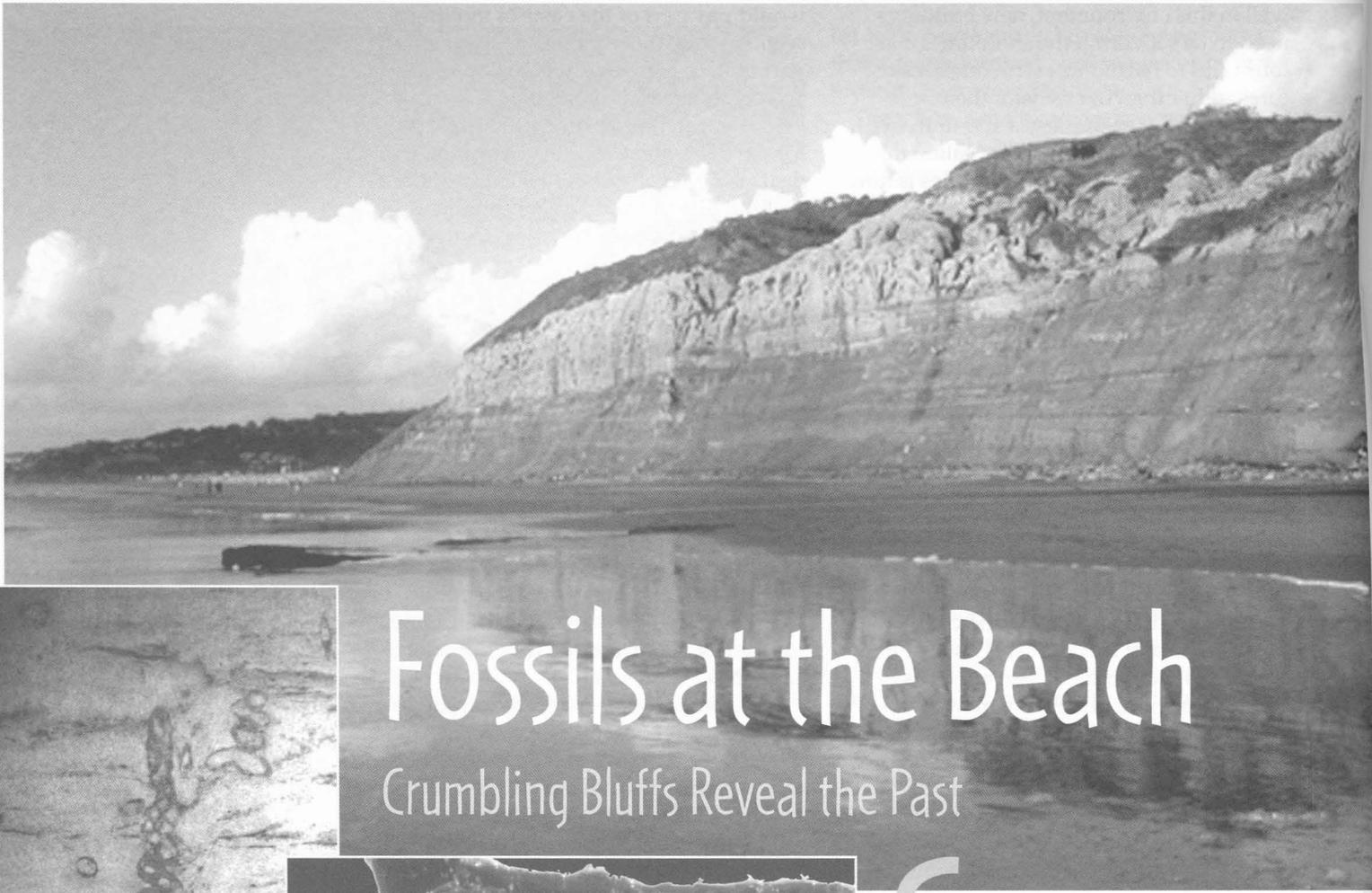
Sandra Threlfall, a leading open space advocate, commented at a BCDC hearing on the landscape site plan: "The public access is incredible—we are gaining 2,600 square feet of bay access. That does not happen very often."

The waterfront green created as part of the Estuary condominium project may soon be extended by the development of a pocket park where Derby Avenue meets the shoreline. If built, Derby Avenue Park would complete a continuous stretch of Bay Trail and waterfront access from the frontage of Watertown Lofts and the Estuary complex and across the new Cal Crew parcel.

Oakland faces a difficult task: to restore its Estuary waterfront in a manner and at a pace that preserves the unique value of what is already there. It will take a willingness to consider how each property—given its particular location, terrain, and history—can best contribute to the beauty and vibrancy of the waterfront and its neighborhoods. It will also take a long-term commitment, like that shown by the Unity Council, to identify and fight for needed parkland. Finally, it will take well-conceived housing, like Signature's Estuary, which places public waterfront access front and center.

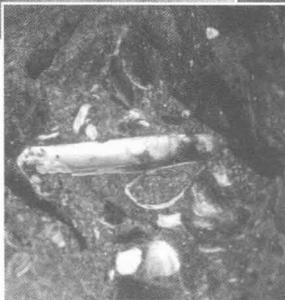
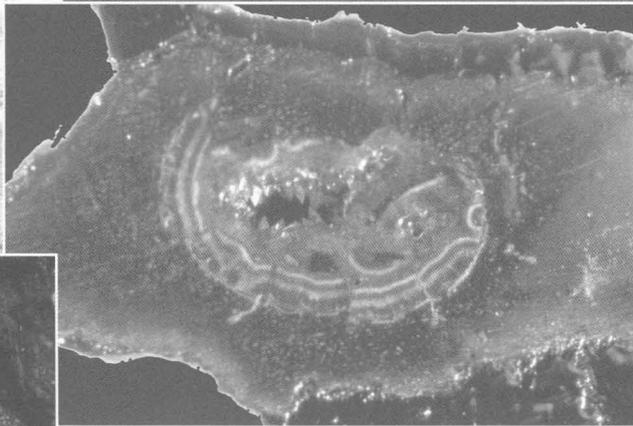
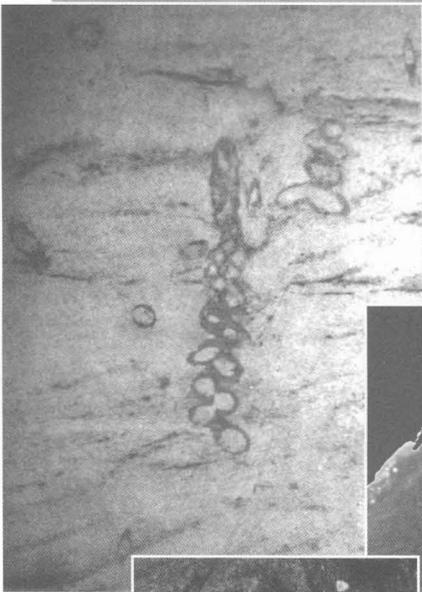
This may not be the fast track, but in the long run it's the best track. ■

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Fossils at the Beach

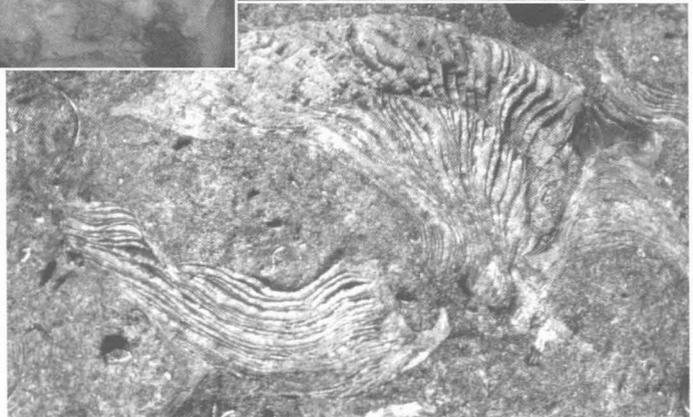
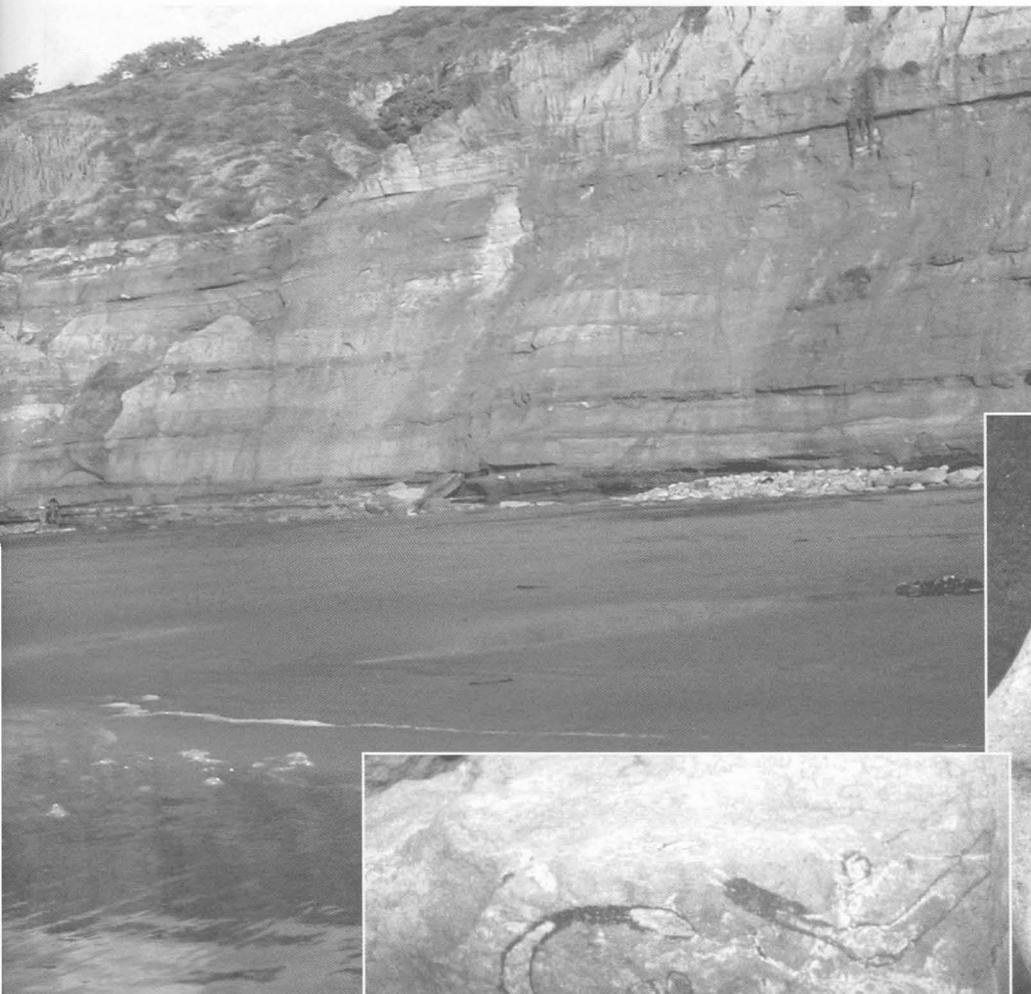
Crumbling Bluffs Reveal the Past



SINCE SERVING AS A docent at Torrey Pines State Beach in 1991, Wesley Farmer has combined his love for that mile-long beach with his interest in paleontology to make a photographic record of the wealth of fossils revealed whenever the bluffs crumble. Entirely

on his own time and without grants or other financial aid, he has compiled thousands of photos documenting the changing faces of the sandstone bluffs, locations of Eocene Epoch fossils (55–35 million years ago), and the fossils themselves. He is also trying to make this archive available to people and institutions who might find it useful.

PHOTOGRAPHS
BY WESLEY
FARMER



Top: Runoff from Animal Canyon has carved a notch in Sea Cliff.

Far left: Spiraling gyroliths are fossilized burrows of Eocene marine animals.

Left bottom: Razor clams now live in calm bays and estuaries; these fossils are uncommon at Torrey Pines.

Left center: The hollow core of this piece of petrified wood is lined with crystals—a kind of geode.

Right and center right: Burrows made by ghost shrimp, which press balls of food and mud into the walls, forming small pits.

Right bottom: A fossilized oyster shell.

CAN WE PROTECT MORE COASTAL WILDERNESS?



Bluffs at Point Reyes

BRETT WILKISON

PHOTOGRAPHS
BY TIM PALMER

Photographs with this story are from: *California Wild: Preserving the Spirit and Beauty of Our Land*, by Tim Palmer, Mary Liz Austin, and Terry Donnelly. Voyageur Press, Stillwater, MN, 2004. 144 pp., \$29.95 (hard cover).

ALATE OCTOBER WIND races off the ocean past Big Sur's Bixby Bridge, sweeps around a gap in the coastal hills, whistles between white-fenced corrals in a secluded valley, and barges in through the open barn doors of the Brazil Ranch, chilling the 60 people sitting inside. Representative Sam Farr of Monterey stands at a podium, snug in a black windbreaker, reading from the Wilderness Act of 1964.

The trail volunteers, public land managers, environmental educators, and retirees in the audience have come to celebrate the 35th anniversary of the Ventana Wilderness designation and, by coincidence, the 40th anniversary of the Wilderness Act. That legislation created the National Wilderness Preservation System, which now encompasses 106 million acres, nearly five percent of U.S. land, including 14 million acres in California. These ecologically, historically, and scenically rich public lands—designated by Congress and managed by four different federal agencies—are protected like few others. They remain

roadless, with prohibitions against motorized vehicles and mechanized equipment (including bicycles), and are managed to preserve healthy ecosystems and opportunities for primitive recreation and solitude.

"If we're going to have these lands that inspire people, we've got to recommit," said Congressman Farr, with a sweeping gesture toward the peaks behind Big Sur's coastal hills. It's a message that resonates with this group. Many wilderness advocates believe that the next 30 years may offer the last chance to protect wild roadless areas in the state, especially along the coast.

THE WILD COAST

CALIFORNIA'S DESIGNATED wilderness is mostly in the Sierra Nevada and Mojave Desert, yet—to many people's surprise—325,000 acres are within five miles of the ocean's edge: 300,000 in federal lands and 25,000 in state parks. There are four federal wilderness areas—Ventana Wilderness and Silver Peak Wilderness in Monterey County,

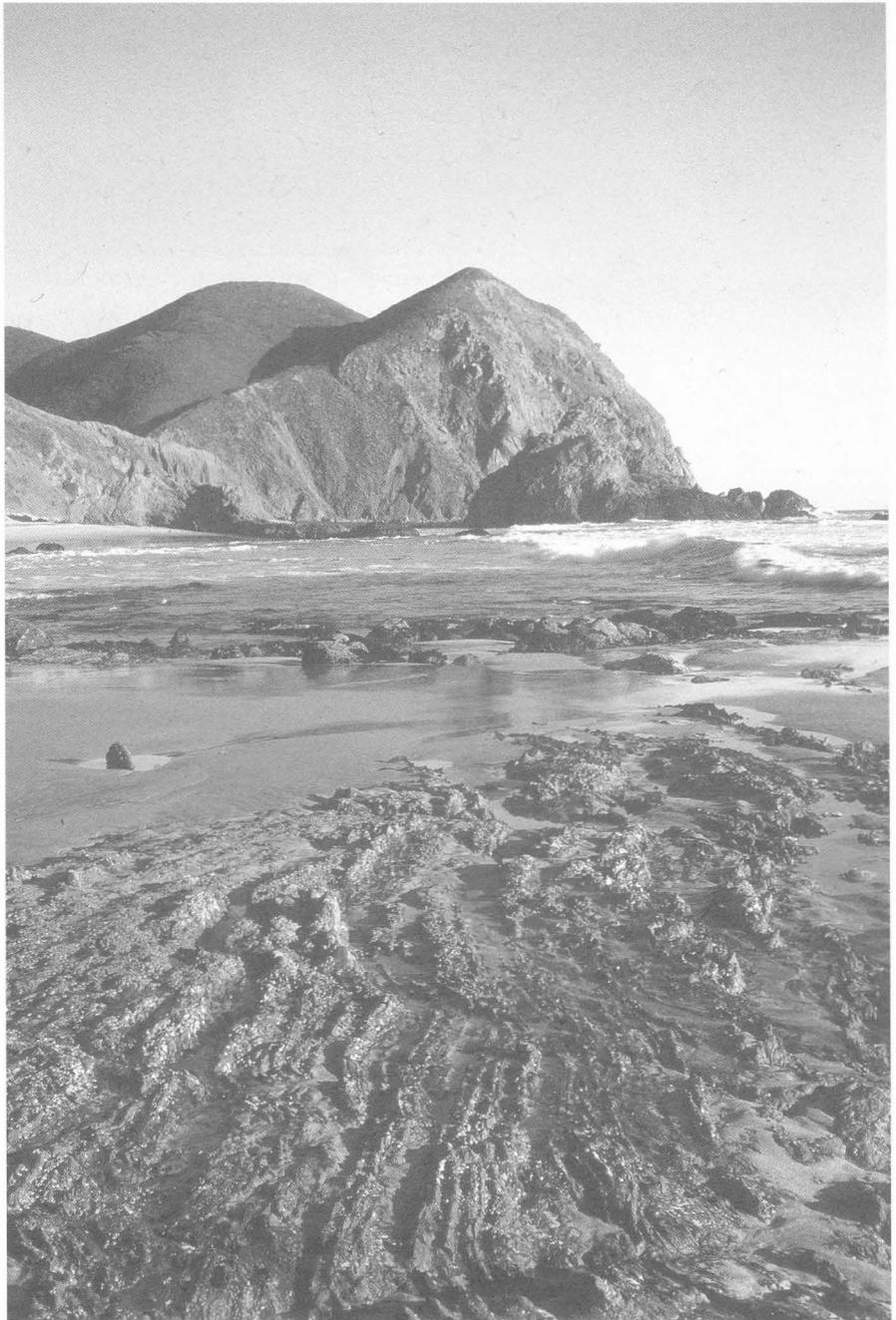
Philip Burton Wilderness in Point Reyes National Seashore, and tiny Farallon Wilderness in the Farallon National Wildlife Refuge off the coast of San Francisco—and four state park wilderness areas—Point Mugu, in Ventura County; Big Basin, north of Santa Cruz; and Prairie Creek Redwoods and Jedediah Smith Redwoods on the North Coast. These lands' natural features include redwood forests, oak and chaparral hillsides, lush riparian valleys, pine-covered ridges, broad coastal terraces, and rocky, windswept islets. Most are remote places, laced by trails that offer quiet, natural experiences that are increasingly rare in coastal California.

Wilderness advocates have set their sights on more. The Northern California Coastal Wild Heritage Wilderness Act, sponsored by Senators Barbara Boxer and Dianne Feinstein and Rep. Mike Thompson of St. Helena, was passed by the Senate in December and has not been heard in the House. The bill was re-introduced in both the Senate and the House in January. It would designate as wilderness approximately 200,000 acres in the Mendocino and Six Rivers National Forests (Lake, Mendocino, Del Norte, and Humboldt Counties) and 100,000 acres of Bureau of Land Management (BLM) lands, including 40,000 acres of the King Range Natural Conservation Area (NCA) on the Lost Coast. The NCA's manager Gary Peterson says passage of the bill "would not dramatically change our management of the King Range," for the BLM has managed it as de facto wilderness for 30 years. It would, however, offer a permanent guarantee of maximum protection for the area.

All public wildlands, including potential coastal wilderness, are under pressure from the expansion of cities and suburbs, the growing popularity of motorized and mechanized recreation, and drastic cuts in the budgets of managing agencies.

Roughly 87 percent of Californians—some 30 million people, according to the U.S. Census Bureau—live in the state's 29 coastal counties. The California Department of Finance currently projects that by 2036 the state's population will top 50 million. If distribution stays the same, that would be 43.5 million people living along the coast.

Armed with such projections, and a 1998 National Sporting Goods Association study showing that wilderness hiking and camping by Californians grew by 42 percent from 1990 to 1998—reaching 24 million visitor days of camping and 64 million of hiking in



Pfeiffer Beach, Big Sur

1998—advocates launched the California Wild Heritage Campaign in 2000. The campaign seeks to add wilderness status to all those public lands that, in their view, need maximum protection.

The North Coast bill is one of the campaign's three pending wilderness bills. The other two—a southern California bill sponsored by Rep. Hilda Solis of El Monte, and a northern California bill sponsored by Rep. Mike Thompson—would designate wilderness further inland. The North Coast bill enjoys support from local interests that traditionally oppose wilderness additions, including some homebuilder associations,



Sea rocks and waves, North Coast

timber companies, and agricultural operators. It is opposed by advocates of off-highway vehicle recreation and mountain biking, two of the fastest-growing activities on public lands, according to studies by the BLM and U.S. Forest Service.

The International Mountain Bicycling Association testified against the bill in a Senate hearing on July 22, 2004. John Gardiner, its California representative, said the Association supports protection for the area, "but amended, so that we [mountain bikers] don't lose access." Rather than a wilderness, the group would like to see a national conservation area, or protection that permits trails that accommodate mountain biking.

The Blue Ribbon Coalition, an 11,000-member organization that promotes trail-based motorized recreation on public lands, also testified against the bill in the July 2004 Senate hearing. Don Amador, the group's

western states representative, contends that areas included in the North Coast bill are not true wilderness. "Those lands don't fit the original criteria of the Wilderness Act as being untrammeled by man," Amador said. "They have cell towers, radio towers, and other man-made structures, and one area is near a landfill. I don't think hikers, including myself, want to be tying our shoes at a wilderness trailhead and looking over our shoulder at the county landfill."

Ryan Henson, conservation director of the California Wilderness Coalition and a principal author of the North Coast bill, responded by saying that such areas "are well outside of the wilderness proposals." He added that past legislation, including the Endangered American Wilderness Act of 1978, established that the sights and sounds of civilization outside of wilderness have no bearing on the qualification of an

area for wilderness status. "In the last 30 years, Congress has designated as wilderness areas where civilization was audible or visible far more than it is in any contained in the North Coast bill," Henson said.

Several other issues will affect the future of wilderness in California as well. Land managers have already been challenged by competing uses now allowed in wilderness—hiking, camping, fishing, hunting, climbing, non-motorized boating, livestock grazing—and prohibited uses, including mountain biking and off-highway vehicles. Wilderness supporters worry about the Bush Administration's targeting of public lands near protected or potential wilderness for logging and oil and gas drilling.

Managing wilderness for both people and wild nature has also grown more difficult. Gene Blankenbaker, deputy supervisor for the 1.7-million-acre Los Padres National Forest, said "wildfire is one of our biggest challenges." Managers, he said, are charged with upholding wilderness values, "which means that fire has a role to play in the ecosystems." However, Los Padres spans the highly settled coastline between Ventura and Monterey.

"Around here," Blankenbaker said, "even if you're 12 miles deep in the San Rafael Wilderness, a Santa Ana wind picks up and less than 12 hours later that fire is in the suburbs of Santa Barbara."

COMPROMISE AND STEWARDSHIP

EXPANDING THE wilderness system had broad nonpartisan support in the decade following the Wilderness Act of 1964. Wilderness became a politically divisive issue, however, during the presidency of Ronald Reagan, whose first Secretary of the Interior, James Watt, opposed most wilderness proposals. Now California is among the few states where wilderness still has strong congressional support, according to Bob McLaughlin, a long-time wilderness advocate and former chair of the Sierra Club's San Francisco Bay Chapter Wilderness Subcommittee.

Yet in November 2004, at a slideshow celebrating the Wilderness Act in a Berkeley outdoor store, McLaughlin suggested that even in California, the days of "pure wilderness bills" may be over. The recently passed Nevada public lands bill, the Lincoln County Conservation, Recreation, and Development Act, could be a precedent, he said. While designating 770,000 acres as wilderness, it also included several large public land sales and exchanges, a utility corridor through public lands for a water pipeline serving Las Vegas, and a major trail concession to off-highway vehicle users.

Wilderness managers have long dealt with compromise, however, and now,

Ventana Wilderness, looking south from Ventana Double Cone





Nacimiento-Fergusson Road, in the Santa Lucia Mountains, Ventana Wilderness

because of budget shortfalls, they are turning to volunteers for help. Peter Keller, wilderness program manager for the Forest Service's Region 5, said that because of annual budget cuts of \$200,000 over the last four years, his program staff members have gone "from being the doers to being the facilitators." He oversees stewardship on four and a half million wilderness acres with a total operating budget of \$3 million, which, he points out, amounts to less than 70 cents an acre. As a result, some places are suffering from wear and tear as well as outright abuse. Sikes Hot Springs, on the Big Sur River in the Ventana Wilderness, for instance, is about ten

miles from the nearest trailhead, yet is visited so often that it fails to deliver the solitude that is supposed to be part of a wilderness experience, Keller said. Other places in the Ventana have been degraded with trash, improper disposal of human waste, and deteriorating water quality. Lacking funds for backcountry patrols and without the permit system that limits backpacker numbers in popular Sierra Nevada areas, Keller has turned to volunteers from the Ventana Wilderness Alliance for help with clearing trails, gathering trash, and monitoring use.

More than a dozen other organizations similar to the Alliance now play supporting roles to wilderness managers across the state. Keller said their partnership has changed the agency's mentality for the better. "Many people got into the Forest Service to work in the woods, away from people. It turns out that a majority of the work is with people. In the long run, we're building a constituency which otherwise wouldn't be involved with their local forest. They work alongside the Forest Service now as stewards."

While volunteers have been increasingly involved in wilderness stewardship over the last decade, since 1964 their biggest role has been in advocacy for designation of wilderness. Inspired by their love of hiking, camping, climbing, hunting, fishing, and wandering in nature, with passion and hard work they have scored many successes.

Back at the Brazil Ranch, Boon Hughey and his fellow Ventana Wilderness Alliance members are celebrating their recent success. Hughey, a founding board member, has backpacked throughout the Santa Lucia Mountains, the coastal range that stretches from northern Santa Barbara County to Monterey. Soon after the Alliance was founded in 1998, he and a dozen other members went to work mapping the remaining potential wilderness in the northern Santa Lucias. In collaboration with the California Wilderness Coalition, the Alliance developed a wilderness proposal for the area, then approached owners of private property near the lands they proposed to protect.

"The response was mostly positive," Hughey says. "Farmers in the Salinas Valley voiced some opposition over concern for their water rights," but that proved to be a non-issue. The Big Sur Wilderness and Conservation Act, sponsored by Rep. Sam Farr, was signed by President Bush in December 2002—the first California wilderness bill to pass in eight years. It added 57,000 acres to the existing Ventana Wilderness and Silver Peak Wilderness, which together equal 270,000 acres, more than 80 percent of the state's coastal wilderness.

That accomplished, the Alliance has turned to other projects, including trail maintenance, advocating for Wild and Scenic River designation for the Arroyo Seco and Little Sur Rivers, moving forward with a wilderness intrusion inventory (mapping things that do not belong in the wilderness for future removal), and, perhaps most difficult of all, independent monitoring of livestock impacts on habitats in wilderness grazing allotments—a process Hughey describes as "contentious." So it's no surprise when Hughey says that above all, he looks forward to "going out with the volunteers, getting out into the outdoors with good people to do projects." ■

Brett Wilkison's last Coast & Ocean article was "Tilapia Growth Hormone Test," Winter 2003-04.



San Francisco's 150 Years of Tidal Observations

CAPTAIN ALBERT E. THEBERGE, JR.

TO OBSERVE THE CLOCKWORK nature of our universe, we have few backdrops as dramatic as the Golden Gate. Twice each day the tides flood into San Francisco Bay, and twice they rush out on the ebb. Ships plan their sailing and docking times according to these daily risings and fallings. Commercial and naval wharves, seawalls, the great bridges of the Bay Area, underwater communications cables, and pipelines have all been engineered and built taking the tides into consideration. Fishermen, beachcombers and tidepoolers, surfers, and lovers of the shore all are affected by the tides.

Although people have observed tidal phenomena for thousands of years, systematic study and prediction of tides are relatively recent. Both Alexander the Great in 325 B.C. and Julius Caesar in 55 B.C., being accustomed to the Mediterranean Sea, which has little tidal variation, almost met disaster because of tidal events. Alexander's fleet nearly met its end when it was marooned on the Indus River, and Caesar's boats were so battered by the surges of a high English Channel full-moon tide while closely anchored that his fleet was forced to retreat from a battle with the Britons.

For centuries many observers had noted the relationship between phases of the moon and tidal range, and some produced crude tide tables. It was not until 1687, however, that Sir Isaac Newton determined that tides are caused by variable gravitational forces of the sun and moon.

CAPTAIN ALBERT E.
THEBERGE, JR.,
NOAA CORPS (RET.)

The tiny building is the San Francisco tide gauge house at Fort Point.

The great estuary now named San Francisco Bay was discovered—as far as Europeans were concerned—by a sergeant in the Spanish colonial army. It was another six years, however, before the first European ship would sail through its entrance. The San Carlos, commanded by Frigate-Lieutenant Juan Manuel de Ayala, entered the bay on August 5, 1775. Carrying full sail with a stiff west-northwest wind blowing from astern, it strained against an ebb tide. Ayala estimated the current at six knots—probably an exaggeration, but the first inkling of the nature of the tides and tidal currents of San Francisco Bay.



Giant cranes from China narrowly clear the Golden Gate Bridge, bound for Oakland. Bay Bridge clearance was much tighter and relied on accurate tide records.

Predicting tidal movements took longer. That required knowledge of the configuration of oceanic basins and local conditions including water depth, bottom slope, and meteorological effects. Until the 17th century, when more accurate solar and lunar tables and time-keeping instruments became available and a scientific infrastructure was developed to coordinate observations, the only way to measure tides was to install a vertical staff, graduated in some linear unit, in the water and have an observer record the changes. This process was subject to human error, carelessness, and subjectivity.

By the mid-19th century, there were a few professional tide observers in the United States Coast Survey (notably Gustavus Wurdemann, repeatedly praised for his accuracy), but in most cases the observations were entrusted to local citizens. By this time more accurate sun and moon tables had been developed, time-keeping mechanisms had been improved and, perhaps most importantly, scientists and engineers in organizations such as the U.S. Coast Survey had begun turning their attention to the tides. In San Francisco, two coordinated sets of observations were undertaken using tide staffs at Sausalito and Rincon Point (near today's SBC Park, famous for Barry Bonds's homeruns).

The initial series of Rincon Point observations led Alexander Dallas Bache, great-grandson of Benjamin Franklin and

superintendent of the Coast Survey, to draw some important conclusions. First, there was a great difference between the first and second high and low waters of each lunar day (the 24 hours and 50 minutes the moon takes to travel once around the earth). Not only was this significant for assuring ships safe passage, but it also provided a reference for soundings used in charting the Bay's waters. Recognition of this inequality led to the adoption of "mean lower low water" as the plane of reference for charts on the West Coast and Alaska, as opposed to "mean low water," as used on the East Coast and Gulf Coast.

In 1851, a new technology was developed by the great maker of scientific instruments Joseph Saxton: a self-registering tide gauge, consisting of a float attached by wire to a geared mechanism that drove a pencil along a rotating drum. It operated 24 hours a day with minimal oversight. This system, synchronized so that the tracings of the tides created a sinusoidal curve, effected a revolution in both the quantity and quality of tide records, and shortly afterward a new tidal division was established at the Coast Survey headquarters in Washington, D.C.

In 1853 Superintendent Bache sent Army Lieutenant William P. Trowbridge to the West Coast with three of the new tide gauges, to be installed at San Francisco and San Diego in California and at Astoria, Oregon. Trowbridge first set up a self-registering gauge in the North Beach area of San Francisco; a year later, it was moved to Fort Point in the Presidio. Amazingly, since that time this gauge and its successors have produced the longest-running unbroken series of tidal observations in the Americas. It is probable that there is no longer continuous record of any other geophysical phenomenon in the Western Hemisphere.

In addition to the three on the West Coast, self-registering tide gauges were also established at Governor's Island, New York and Old Point Comfort, Virginia. Because of storm, disaster, carelessness, or other causes, the only gauge that survived with an unbroken record of observations was the one in San Francisco.

SERENDIPITOUS SCIENCE

ALTHOUGH THE SAN FRANCISCO tide gauge's primary purpose always was to aid commercial and naval shipping, it has added extraordinarily to our knowledge of the oceans and the movements of the earth.

Within six months of its installation at the Presidio, a great earthquake occurred on December 23, 1854, off Japan's central coast. It raised a series of tsunamis that traveled across the Pacific. Those waves were recorded on the self-registering tide gauges along the West Coast, superimposed on the regular tidal record as a series of sinusoidal squiggles. "There is every reason to presume that the effect was caused by a submarine earthquake," Lieutenant Trowbridge wrote to Superintendent Bache. This was an amazing insight, given that seismographs were still 25 years in the future and that no earthquake had yet been remotely measured by any means.

Later, armed with knowledge of the time and location of the earthquake and arrival times of the tsunami waves at San Francisco and San Diego, Bache was able to calculate the average depth of the Pacific Ocean between Shimoda, Japan and California as being between 12,600 and 15,000 feet. Modern measurements for the average depth of the seabed are 15,504 feet from Shimoda to San Francisco and 15,221 feet to San Diego.

Over the next 150 years the San Francisco tide gauge recorded many of the devastating tsunamis of the Pacific, including waves from the great Krakatau eruption of August 26, 1883. A few hours after that eruption, the U.S. Coast and Geodetic Survey published notice of an extraordinary event, before the location or any of the details of the disaster were known. The gauge has also survived major local events, including the Hayward earthquake of 1868, the San Francisco earthquake of 1906, and the 1989 Loma Prieta earthquake.

It may seem strange, but elevations throughout North America have been determined relative to mean sea level at Coast and Geodetic Survey tide stations. The concept of mean sea level is inseparable from the fact that sea level changes. Because of tectonic forces, subsidence, isostatic adjustment, the rising of land previously covered by glaciers, and a combination of these effects, the height of coastal lands changes relative to sea level. However, after taking into account these perturbations, most of the last century has shown a steady rise in sea level as determined by tidal records, augmented over the last decade by satellite altimetry. Tidal records show rise rates of approximately two millimeters per year, while satellite altimetry shows even higher rates.

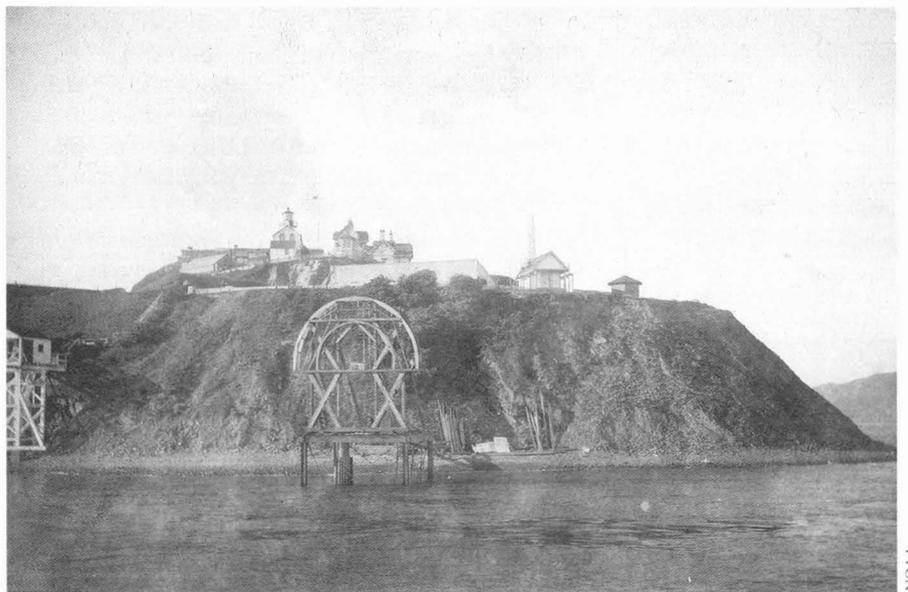
Extreme high-water events during periods of El Niño can be seen clearly in the San

NEW OCEAN OBSERVATION SYSTEM

THE 150-YEAR RECORD of tidal observations at the Golden Gate is a fundamental building block for the far-reaching California Coastal Ocean Observing System (CalCOOS), now being developed by a multi-partner group coordinated by the Coastal Conservancy. Instruments on shore, in the ocean, and on satellites will monitor surface and subsurface currents, sea surface temperature, salinity, chlorophyll, and other phenomena critical to marine life. CalCOOS will coordinate, enhance and supplement real-time observations of the coast and will enable California to participate in a global effort to improve scientists' ability to detect changes in marine ecosystems rapidly, and to predict changes and determine their consequences.

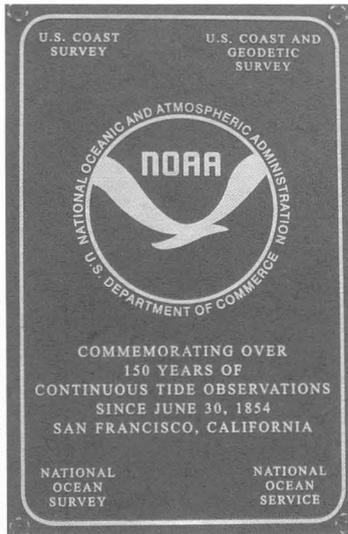
As part of CalCOOS, the Coastal Conservancy is currently implementing the Coastal Ocean Currents Monitoring Program (COCMP) in partnership with marine labs, management agencies, the environmental community, and industry, with \$21 million dollars in funding from the last two voter-approved bond initiatives. COCMP will focus primarily on installing instrumentation to measure and map surface currents (the uppermost meter of the water column) along the state's entire coast. Shore-based high frequency radar will provide, in close to real time, maps of the constantly changing sea surface. These maps will help track oil spills and the transport of other pollutants and, when combined with other data, will provide the basis for better decisions related to beach closures, fisheries management, harmful algal blooms, sediment transport and coastal erosion, and marine safety. Two regional systems have been designed, one in the Southern California Bight with Scripps Institution of Oceanography taking the lead, and one in central and northern California, led by San Francisco State University. These systems have been designed to address local needs, but data collected will also be integrated statewide and served over the web in real time. Inadequate information about water movement is the single most important obstacle to efforts to understand the coastal ocean. As stated in Governor Arnold Schwarzenegger's recently released Ocean Action Plan, developing an observing program for the ocean similar to what exists for weather is now a high priority for California.

—Sheila Semans

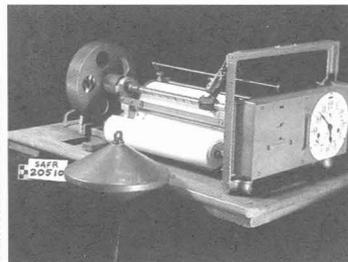


An early tide indicator at Alcatraz

NOAA



CAPTAIN ALBERT E. THEBERGE, JR.



NATIONAL PARK SERVICE

An old self-recording tidal gauge

The complete version of this article is online at: http://tidesandcurrents.noaa.gov/publications/150_years_of_tides.pdf.

San Francisco historical tide record. By analyzing interannual to decadal variations in sea level, especially from a long baseline record like San Francisco's, we can better understand El Niño's southern oscillation and more effectively predict the phenomenon in the future.

ESTABLISHING THE RECORD

OBTAINING A CONTINUOUS record of the tides in San Francisco since 1854 has been a testament to human perseverance and ingenuity. In 1877, after the Presidio wharf fell into disrepair and had to be abandoned, a new gauge site was set up in Sausalito. Meticulous care was taken to preserve the Fort Point data series through the simultaneous operation of the Fort Point and Sausalito gauges. In 1881, the Sausalito wharf began to deteriorate and the gauge was moved again. Then, in 1897, it was finally decided to move the gauge back to a spot just east of the original Fort Point site near the present location of the gauge.

Tide gauge technology evolved little from 1854 until the early 1960s. The process was always labor-intensive, as tidal observers had to make daily visits to the gauge and manually transcribe the details from the sinusoidal graph. In January 1976 a digital paper-punch recorder at last replaced the pencil-and-drum mechanism. This new instrument recorded the height of the tide at set intervals, usually every six minutes. As the punch tapes could be machine-read, this system sped up the processing, but the gauge itself still relied on a float-wire water-level sensor and a gearing mechanism that synchronized time with the paper record. A human observer was still required to maintain the gauge and make daily tide-staff readings.

Beginning in 1985, the National Ocean Service embarked on a major upgrade of

what is now called the National Water Level Observation Network. The network of old float-wire systems was replaced by what is titled the Next Generation Water-Level Measurement System, which consists of an air acoustic water-level sensor coupled with electronic data acquisition. This system has numerous advantages, including the direct comparison of the water-level sensor to local benchmarks, electronic data storage, a backup pressure water-level sensor with its own data logger, and ancillary sensors for water and air temperature, wind speed and direction, and barometric pressure. Tide observers and tide staffs are no longer needed, but what really sets this system apart is its ability to transmit data to a central facility for near real-time analysis, processing, and distribution.

The new water-level measurement gauges have also been integrated into the NOAA Physical Oceanographic Real-Time System (PORTS) that has been introduced in many major U.S. harbors, including San Francisco Bay. PORTS measures real-time water levels, currents, and meteorological phenomena, such as winds and visibility, and makes these data immediately available via the Internet (see http://co-ops.nos.noaa.gov/d_ports.html) to local users for operational decisions including when to load or off-load cargo, when to sail under bridges, and when to sail vis-à-vis the currents and tides. With more than 250 deep-draft (and getting deeper) vessels entering San Francisco Bay each month, and approximately 85,000 pleasure boats registered on the Bay, this information is critically important. ■

"After 27 years as a commissioned officer in NOAA Corps, I washed up on the shores of the NOAA central library," says Captain Albert E. Theberge, Jr. He is pursuing a 25-year interest in the history of NOAA and the Coast Survey.



CAPTAIN ALBERT E. THEBERGE, JR.



Our Urban Waterfronts—for Work, Play, and Learning

WITH THIS ISSUE, *Coast & Ocean* begins a series of articles on urban waterfronts, first looking at Oakland. Waterfronts are near and dear to my heart, as my earliest childhood memories are of living near the waterfront in southwest Washington D.C.

Most people probably don't know that Washington even has a waterfront, and admittedly it isn't (or wasn't) much. When I was a kid you could buy crabs off "crab boats" tied up at docks on the Potomac River. I put that in quotation marks because in fact the crabs were delivered to the boats by truck. Nevertheless, it was always a thrill to go down to the river's edge, smell the heady mixture of brackish water, diesel fumes, and dead fish, and haggle over a bushel of crabs with a crusty old salt standing on a fishing boat as it rocked gently at its pier.

Most cities have been built around existing ports. Washington grew near Georgetown, at the highest navigable point on the Potomac. Almost every coastal California city (as well as many inland cities) has some kind of waterfront, if not a working port. From Crescent City Harbor near the Oregon border to the Port of Eureka in Humboldt Bay, to Noyo Harbor in Mendocino County, through all the harbors large and small in the Bay Area, past Morro Bay, Port Hueneme, Los Angeles, Long Beach, and San Diego, almost all of the state's coastal cities have a maritime past, if not a present. Before the transcontinental railroad was built, more people immigrated to California by sea than any other mode.

More than 95 percent of U.S. overseas trade moves through the nation's seaports, and California has some of the

largest deep-draft ports in the nation. In 2002, 32 percent of U.S. trade, in value of goods, went through California's seaports, mostly through Los Angeles and Long Beach, according to the Public

Policy Institute of California. By 2020, the industry expects national maritime trade volumes to double. California's export economy has long been oriented toward the Pacific Rim, a rapidly growing market.

Unfortunately, we have not done well by our urban waterfronts in California, neither those that are smoothly functioning economic engines nor those that are derelict reminders of a bygone economy. Historically we have tended to

wall them off from the cities they gave birth to. Sacramento's waterfront, lovingly restored, is separated from the rest of the city by 10 lanes of Interstate 5 crossable only through a spooky underground parking structure. Oakland's waterfront is separated from the rest of the city by Interstate 880/980. Long Beach managed to put a great deal of development between itself and its namesake harbor. (After living in California for 15 years I was surprised to learn that there really was a beach there!)

Fortunately there is a lot of good happening at our waterfronts, and the Coastal Conservancy has been a part of this movement since 1981, when the Urban Waterfront Program was added to our charter. As detailed elsewhere in this magazine, Oakland's waterfront has changed markedly (and I think for the better) since I moved to that city over 10 years ago. The Conservancy helped the City of Eureka spruce up its working port with a sturdy and well-designed boardwalk. With a little help

from the Loma Prieta earthquake, San Francisco has done a magnificent job of redesigning the Embarcadero area, and the Conservancy has contributed with a number of visitor-serving amenities and artistic flourishes. Some years before that, we helped rebuild the fishing fleet facilities in San Francisco to keep at least that part of the waterfront a working port. Conservancy staff are currently engaged in the second phase of an effort to redesign Port of Los Angeles facilities in San Pedro, reconnecting that community with its own waterfront and with the rest of Los Angeles. We have also contributed to maintaining commercial fishing businesses at some smaller ports like Morro Bay and Bodega Bay.

Our mandate includes helping visitor-serving institutions bring people to the water, so we have supported maritime museums up- and downcoast, and helped bring tall ships to a number of ports. It is very important to us, however, that we do more than just help our waterfronts be nice places to visit. We are vitally concerned with maintaining the working character of waterfronts wherever possible, and that is one of the reasons we have completed a number of projects over the years in support of commercial fishing.

California is a maritime state with a rich maritime history and heritage, and a vibrant, economically diverse maritime present. Bad planning and historical accidents have severed our connection to this past and have often made it difficult or unpleasant for the average citizen to connect with this heritage, or even to get to the water's edge. We are working hard to correct this, because as anyone with a little experience will tell you, it's a bad idea to turn your back on the ocean.

Sam Schuchat is the executive officer of the Coastal Conservancy.



SAM SCHUCHAT

COASTAL CONSERVANCY NEWS

IN 2004 THE COASTAL Conservancy gave new support for over 125 projects along the coast and around San Francisco Bay, allocating \$135 million, leveraged by almost \$215 million of non-State funding. Projects included acquisition of more than 30,000 acres to be protected for recreation, habitat, scenic lands, and farmland, along with protection through conservation easements of another 83,000 acres.

Major accomplishments included: significant progress toward the completion of the California Coastal Trail; establishment of the Coastal Ocean Currents Monitoring Program; removal of barriers to fish migration; wetland protection and restoration, including planning for the vast San Francisco South Bay Salt Ponds; and major land acquisitions, including the Hearst Ranch.

In December, the Coastal Conservancy authorized funding for more than 30 projects, most funded from bond acts approved by voters in 2000 and 2002.

KELP PLANTING TO EXPAND

KELP FORESTS provide habitat to many juvenile fish species, but since the 1960s, the Southern California Bight's kelp forrests have dimin-

ished by 75 percent, according to surveys. Santa Monica BayKeeper and the California CoastKeeper Alliance have taken remedial action during the past three years by organizing teams of staff and volunteer divers to plant kelp seedlings along reefs. Some of these seedlings were raised by schoolchildren in classrooms.

So far, about 3,000 square feet of new forest have been planted. Plans call for planting 12,000 more square feet during the next three years in Santa Monica Bay and elsewhere in the Bight. The Conservancy approved \$400,000 to Santa Monica BayKeeper and \$200,000 to the California CoastKeeper Alliance for this second phase of the restoration.

SAN DIEGO RANCH TO BE PROTECTED

WHEN PRESERVING open space to shelter vulnerable plant and animal species, it makes sense to look at the ecosystem rather than at small, isolated parcels. The City of San Diego is taking just such an approach with its Multiple Species Conservation Plan (MSCP), which aims to protect open space and habitat in the city and on its periphery.

The largest property available within the area the MSCP seeks to protect is the Monte Vista Ranch, more than 4,400 acres of coastal sage scrub, riparian habitat, grassland, and woods in the upper San Diego River watershed. The Coastal Conservancy approved \$9.7 million (of funds granted the agency by the Wildlife Conservation Board for Natural Communities Conservation Planning projects) to the Nature Conservancy to acquire the property, place an agricultural conservation easement on 390 acres that will continue as a working ranch, and keep the rest, about 4,058 acres, as habitat. The

A diver admires kelp in Emerald Cove, Catalina Island



MARK ABRAMSON/HEAL THE BAY

remaining \$7.7 million of the \$17.4 million purchase price will come from the Nature Conservancy, San Diego County, and grant sources including Propositions 12 and 50.

PLANS FOR BALLONA WETLANDS

RESTORATION PLANS are being launched for the Ballona Wetlands in Los Angeles. The Conservancy approved disbursement of \$750,000 to consultants and technical experts it will select to do technical studies, planning, data collection, and other analysis associated with the planning process. Restoration alternatives, as well as funding sources for the work proposed, are expected to be developed by mid-2006. The 607-acre wetland remnant of once-vast coastal marshes has been dramatically altered by oil drilling, creek channelization, and the dumping of soil dredged to construct the Marina del Rey Lagoon.

ACCESS FOR ALL IN MALIBU

FOR YEARS, a number of dedicated access easements in Malibu have remained closed because no public agency could be found to assume responsibility for managing them. Therefore, in 2000 the Conservancy turned to a private nonprofit organization, Access for All, which has agreed to take responsibility for easements in Malibu, currently numbering at least 20. The Conservancy approved \$35,000 to the organization to enable it to complete various tasks for four easements to beaches, including design of signs and development of a new type of gate that



TOM FORD

would automatically lock itself at night and unlock itself in the morning. The gate is being developed and tested in cooperation with students at Pierce College in Los Angeles.

FUNDS FOR MALIBU LAGOON PLANS

A DECADES-LONG effort to bring Malibu Lagoon back to health received another boost with the Conservancy's approval of \$300,000 to Heal the Bay for a final restoration plan and site plans. When restoration efforts began in 1983, there wasn't much left of the lagoon at the mouth of Malibu Creek. Most of it had been filled and two baseball fields were built there. Since then, several major projects have restored tidal flows and habitats, and revegetated the shores with native plants. The new restoration efforts could begin as early as 2006.

PORT HUENEME PIER IMPROVEMENTS

THE HUENEME Beach Fishing Pier, in Port Hueneme Beach Park, Ventura County, hosts fishermen, tourists, the annual Beach Festival and, unfortunately, teredos (aka shipworms), bivalve mollusks which use their shells to tunnel into wood. After a series of storms seriously damaged some of the pier's 188 piles, workers discovered that teredos had bored into the wood and weakened them. The City of Port Hueneme decided that all piles should be replaced and, with funding help from the Wildlife Conservation Board, has already replaced 89. The Conservancy approved \$200,000 to the City to replace another 38.

BUILDING THE BAY RIDGE TRAIL

WHEN COMPLETED, the Bay Area Ridge Trail will connect nine counties and more than 100 communities on a 500-mile continuous path along the ridgetops surrounding San Francisco Bay, opening a door to the beautiful greenbelt that surrounds California's second-largest urban area. The Bay Area Ridge Trail Council has already opened 267 miles of trail, and will be able to open much more with the \$1.2 million the Conservancy recently approved. The monies will be used to complete planning and related



CALIFORNIA COASTAL RECORDS PROJECT

activities necessary to acquire and develop land for new trail segments.

POZZI RANCH TO STAY IN FAMILY HANDS

DEVELOPMENT pressures in the rural areas around San Francisco Bay have been turning farms into subdivisions for years, with immense amounts of money being offered to take the land out of production. The 1,125-acre Pozzi Ranch, on the eastern shore of Tomales Bay in Marin County, would fetch a handsome price. But the Pozzis, a fourth-generation farming family, and the Marin Agricultural Land Trust (MALT) are bent on keeping the land in agriculture. The Pozzis, who currently lease the property, are in the process of trying to buy it. The Conservancy approved \$1 million to MALT to purchase an agricultural conservation easement on the property so the ranch will continue as a part of the working landscape. It will be managed to minimize erosion and, most importantly, development will be limited to improving the two structures already on the property.

RANCHERS PROTECT ESTERO AMERICANO

ESTERO AMERICANO, an estuary on the Sonoma-Marin County border, supports migratory and resident birds, threatened salmonids, and other



SHELLA SIEMENS

Top: Estero Americano

Above: Pozzi Ranch (foreground) above Walker Creek and Tomales Bay

wildlife. Eight ranchers along the Estero are working with the Gold Ridge Resource Conservation District (RCD) to improve habitat by restoring riparian corridors, installing fences to keep cattle out of sensitive areas, and implementing water and soil conservation practices. In 2002 the Conservancy provided funding to allow the RCD to begin creating a comprehensive plan for the Estero and to find ranchers willing to allow and maintain these habitat enhancements. Now this effort will expand to watershed level, with the help of \$650,000 approved to implement conservation plans for eight square miles. The RCD continues to expand the project, with six more ranchers due to join in 2005.

GIVING ELK HERDS ROOM TO GROW

WHEN THE Wildlife Conservation Board (WCB) purchases the Lauffs Ranch in northeastern Napa County, it will be increasing contiguous protected lands to over 40,000 acres. According to the Department of Fish and Game, this will allow herds of native tule elk to roam freely, and many species to be protected and managed at the ecosystem level.

The 12,575-acre ranch is located within both the Blue Ridge–Berryessa Natural Area and the Knoxville–Cedar Rough Conservation Area. The area is remote and large enough to provide a wide variety of habitats—grasslands, oak woodlands, serpentine chaparral, and riparian zones—for numerous wildlife species including bald eagles and other raptors, mountain lions, and black bears. The land will also be part of a linked wildlife corridor from Lake Berryessa north into Lake and Colusa Counties. Humans will be able to enjoy the land as well, with public access for hunting, hiking, and mountain biking planned.

The property will be acquired by the WCB with \$1.5 million in Conservancy money and will be managed by the Department of Fish and Game.

Pomo Bluffs



CITY OF FORT BRAGG

ACCESS TO NAVARRO POINT

ONE OF THE MOST spectacular pieces of the Mendocino County coastline will be opened to the public by next summer with the help of \$109,000 in Conservancy funding.

On Navarro Point, at the mouth of the Navarro River in southern Mendocino County, 55-acres of grassland slope down to steep bluffs. The Point was identified as a prime coastal site for public access over 20 years ago, and was purchased by the Mendocino Land Trust in 1999 with \$1.1 million from the Conservancy. The land trust has since been preparing plans and applying for permits for signs, benches, a parking area, and other improvements. A blufftop trail will add another 4,500 feet to the Coastal Trail.

POMO BLUFFS PARK ON TRACK

ASCENIC CHUNK of land overlooking Noyo Bay in Fort Bragg is almost ready to be transformed into Pomo Bluffs Park. The 20-acre property, purchased by the City of Fort Bragg with over \$2 million received from Caltrans and the Conservancy in 2001, will



CALIFORNIA COASTAL RECORDS PROJECT

Navarro Point

get a 47-space parking lot, pedestrian and bike trails, a restroom, and interpretive signs. Native plants will be restored on much of the site. The Conservancy approved \$600,000 for these improvements.

The park will provide another piece of the Coastal Trail, and will give visitors a place to relax and watch fishing boats move in and out of Noyo Harbor. Some may even see gray whales.

SALMONID RESTORATION CONFERENCE COMING UP

THE SALMONID RESTORATION Federation will hold the 23rd Annual Salmonid Restoration Conference, "Thinking Like a Watershed: From the Headwaters to the Sea," March 30–April 2 in Fortuna. Offerings include workshops, tours of restoration sites, visits to educational programs, technical panels, and opportunities to meet a wide variety of people working together for the sake of salmonids.

Full-day workshops are scheduled on water conservation planning and implementation, instream flow requirements, estuary restoration, and channel morphology. Field tours include Headwaters Forest: Salmon Creek to Tidewater, restoration projects in Humboldt Bay, and along Freshwater Creek, urban streams, and Salmon in the Classroom.

For more information, see www.calsalmon.org or call (707) 923-7501.



BOILING POINT

by Ross Gelbspan. Basic Books, New York, 2004. 254 pp., \$22 (hard cover).

IN HIS SECOND BOOK on climate change, veteran journalist Ross Gelbspan, a Pulitzer Prize winner, makes a strong case for taking comprehensive global action to control global warming.

He discusses how the Bush Administration and the gas, oil, and coal industries have teamed up to downplay the threat of global warming and the critical need to shift to clean energy sources, keeping the U.S. public ill-informed on the issue. Europe, in contrast, benefits from earlier and more comprehensive news coverage of and governmental attention to global warming. As a result, Europe has taken the lead in an international approach halting and perhaps reversing global warming, as embodied in the Kyoto Protocol. The Bush Administration refuses to sign or adhere to this Protocol.

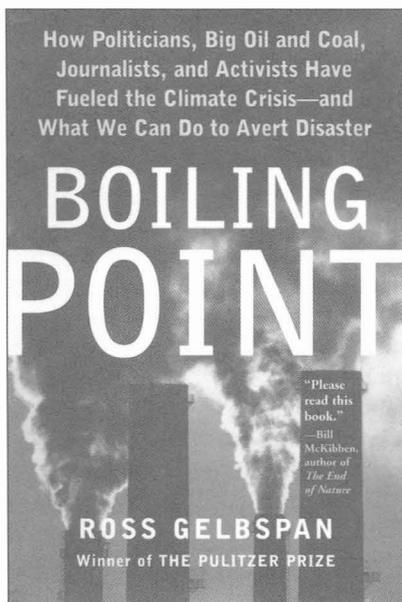
Gelbspan also criticizes U.S. non-profit environmental and climate groups for pursuing "only the most minimal goals" in response to global warming. "By persuading concerned citizens to cut back on their personal energy use, these groups are promoting the implicit message that climate change can be solved by individual resolve. It cannot," he writes.

In his final chapter, "Rx for a Planetary Future," Gelbspan puts forth his preferred policy approach, as embodied in the World Energy Modernization Plan. This plan was developed in 1998

by economists and energy experts who met at the Center for Health and the Global Environment at Harvard Medical School. They called for industrial nations to subsidize clean energy sources rather than fossil-fuel sources, and for creation of an international fund to set up clean energy technology—and related new employment opportunities—in developing nations.

The World Energy Modernization Plan also promotes a Kyoto-type framework that would commit nations to abide by an increasingly stringent fossil-fuel efficiency standard. To generate the political will to support such ambitious policies, he urges environmental and climate groups to reach out and create alliances with groups involved in international relief and development, campaign finance reform, public health, corporate accountability, and human rights. *Boiling Point* should appeal to readers seeking a serious, well-informed discussion of the issues surrounding global warming. Gelbspan's first book on this subject was *The Heat is On* (1997).

—Wesley Marx

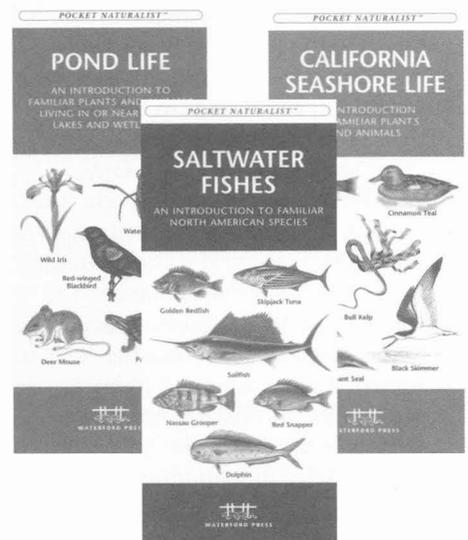


POCKET NATURALIST (SERIES)

Waterford Press, Chandler, AZ, www.waterfordpress.com. \$5.95 each (folded).

THESE HANDY FIELD guides are so compact that you can carry quite a few at a time in one pocket. Printed front and back on heavy, glossy paper, then folded map-like, each offers brightly colored illustrations of dozens of species, along with very brief descriptions. Among the dozens of guides in the series are *California Birds*, *Trees and Wildflowers*, *Seashore Life*, and *Wildlife*; *Los Angeles Birds*, *San Diego Birds*, and *San Francisco Birds*; *Invasive Plants—Western North America*, *Western Backyard Birds*, and *Western Coastal Birds*. The minimal descriptions may occasionally be misleading—saying only that giant kelp has blades up to 15 inches, for example, without mentioning that they are attached to stipes many yards long. Overall, though, significant identifying traits are clearly indicated.

—HMH





No Jump!

Editor:

Thank you for a well done publication. I enjoy receiving and reading it cover to cover. Just one suggestion: Please do not chop stories and articles, e.g., "continued on p. ___." I want to read the article all the way through. I do not turn to the continuation, and when I get there I may not read it at all. I would read it if the articles were all together.

Rita McGowan, via e-mail

Another Klamath View

Editor:

Ms. Izakson's article "What's at Stake in the Klamath Basin," *Coast & Ocean*, Autumn 2004, offers empathetic treatment of several sensitive Klamath River issues. However, the economic study she cited is dangerously flawed. Also, her references to "power subsidies" enjoyed by Upper Basin farmers and ranchers requires further explanation.

The U.S. Geological Survey report containing alleged "amazing calculations" is a highly theoretical exercise, based in part on "cold calls" and mailings sent to random respondents in four western states. Participants were polled on visits to the Klamath River, then were asked if they would increase visits based on improvements to the river such as enhanced water quality and angling harvests. Not surprisingly, respondents answered positively, and the report suggests that recreational visits would increase under these circumstances. The study then balanced the theoretical economic gains associated with increased visits versus the costs for actions that were assumed to improve water quality and fishery conditions.

Although the study states "we have no quantitative information about the impact of the individual restoration activities on habitat or water quality," the "restoration" activities included:

acquiring all farmland within the Klamath Project at an assumed price; acquiring forest land along the Klamath River and tributaries; increasing Trinity River flows by 500,000 acre-feet per year; removal of some Klamath River hydroelectric dams.

The report concludes that the benefits achieved by increased recreational use would far outweigh the costs of buying farms and forests, removing water supplies from California's Central Valley, and removing dams. It provides no explanation for *how* these "restoration" measures will improve fishing and habitat conditions. It also fails to address the impacts of these measures. Even ignoring the callous attitude that would close down entire towns, what would be the cost of acquiring residences, businesses, schoolhouses, and communities throughout the Klamath Project? What would happen to recreation benefits—as well as benefits associated with private farmland—when the farmers disappear? What happens to the national wildlife refuges? How will they receive water when irrigation districts that serve them are wiped off the map?

Izakson and other advocates also appear to have overlooked the study's proposal to impose a long-term moratorium on fish harvesting in the Klamath-Trinity system. This would include an end to all harvesting by commercial fishermen, marine harvesting by tribal fishermen, and "sharp declines" in freshwater harvesting by tribal and recreational fishermen. The report, and Izakson's article, fail to identify the number of jobs that would be lost, or the ripple effect on downstream communities, where merchants who rent boats and sell gasoline and groceries to sport fishermen would be impacted.

The Klamath Project was developed with an understanding that affordable power and water would support the local, rural community. Scottish Power is only generating power in the Klamath River because the federal government

and Klamath Basin water users gave up their ability to develop their own facilities in exchange for affordable power.

We object to the terms "preferential rate" and "subsidized rate." The current contract is the product of negotiation among sophisticated parties that resulted in an acceptable agreement for all concerned.

Dan Keppen, Executive Director
Klamath Water Users Association
Klamath Falls, Oregon

Orna Izakson replies:

There is no question that Aaron Douglas' Klamath Basin study is controversial. The basic tests of academic credibility are peer review and journal publication. The Klamath study has been peer reviewed by top researchers, according to USGS, and is now being considered for publication.

Douglas' methodology already has undergone both peer review and publication as applied to the Trinity River system alone. Its findings appeared in *International Journal of Environmental Studies, Environmental Modelling and Software, Water Resources Development, International Journal of Sustainable Development and World Ecology*, and *Society & Natural Resources*.

Keppen also takes issue with the use of the word "subsidy" since Klamath Project farmers "negotiated" their rate with PacifiCorp. Jim McCarthy, author of the ONRC study, "Ratepayer Ripoff," points out that even if the rate is negotiated, ratepayers from Northern California up through Washington are paying more so that Klamath Project farmers can pay less.

Correction: In "The Restoration Economy," *Coast and Ocean*, Autumn 2004, page 13, it was the Buena Vista Lagoon Restoration Feasibility Study that employed about 20 people. Everest International Consultants, Inc. employs eight.

WE ARE LIKE THESE THINGS

We walk alone on the beach.

Two ships sail by.

The gulls are thick as snow on the rocks;

And the light is sorrowful in the sky.

The purpose of life is hidden and grey as the clouds

That sniff the high rocks like white hounds.

Life is fragmentary and brief as the clouds

And the toppling sand mounds.

Surely we are like these things that touch us:

The half tones, this cool pleasant wind,

The shells drying on the sands, the straggling seaweed.

We are like these things, impermanent and unpinned.

—MADELINE GLEASON

from *The Metaphysical Needle*, 1949

Published with permission of the Estate of Madeline Gleason.

Reprinted in the *Addison Street Anthology: Berkeley's Poetry Walk*

Edited by Robert Hass and Jessica Fisher. Heyday Press, 2004.

This is one of 126 poems on panels set in the sidewalks of Addison Street.
Plant rubbing of salt grass (*Bisticklis spicata*) here and back cover by Ida Geary.



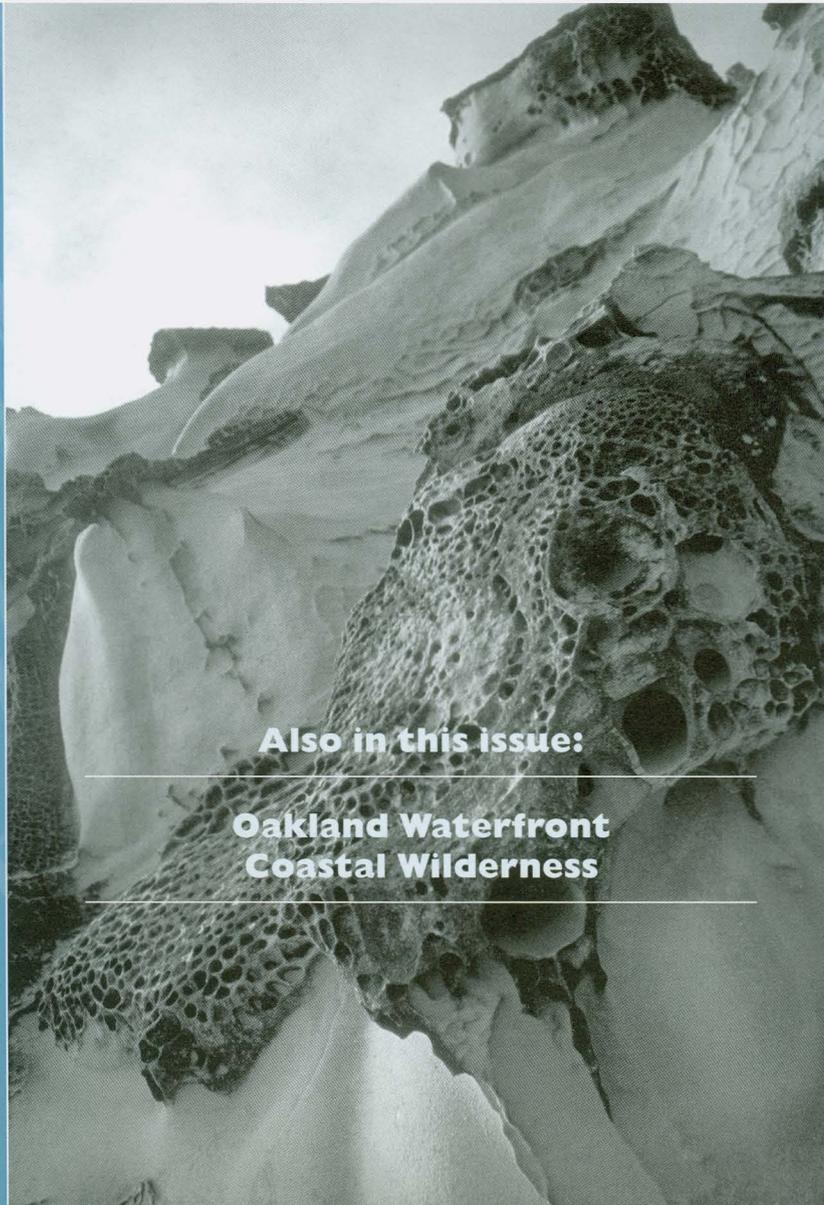
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Also in this issue:

**Oakland Waterfront
Coastal Wilderness**
