

CALIFORNIA

# COAST & OCEAN

VOLUME 11, NO. 2

SUMMER 1995



#### ABOUT THE CALIFORNIA

#### STATE COASTAL CONSERVANCY

The Coastal Conservancy is a state agency working to preserve, improve, and restore public access and natural resources along the coast and on San Francisco Bay. It builds trails and walkways, purchases threatened coastal land from willing sellers, enhances and restores wetlands and watersheds, protects open space and farmland, supports commercial fishing, helps cities develop and improve waterfronts, and crafts innovative solutions to land use conflicts. The Conservancy undertakes projects in partnership with nonprofit organizations, landowners, local governments, and other public agencies. It is funded primarily by bonds authorized by California voters.

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#### **CALIFORNIA COAST & OCEAN**

State Coastal Conservancy  
1330 Broadway, Suite 1100  
Oakland, CA 94612

#### **About the cover:**

**Front:** The Ballona Lagoon, a unique urban wetland in Venice, would long ago have been turned into a private marina had it not been protected under the California Coastal Act of 1976. Now hundreds of school children flock here annually to learn about resident shorebirds. Endangered least terns feed here, flying in from the protected nesting place on the nearby beach. The beach itself is not as easy to get to as this aerial photograph, by Concept Marine, might suggest: Public parking is extremely scarce in this densely developed area.

**Back:** Another face of the coast, north of San Francisco. By Michelle Vignes.

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CALIFORNIA  
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VOLUME 11, NUMBER 2  
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**COASTAL  
ACCESS**

6

**8 Delivering on a Pledge**

*Joan Cardellino and Rasa Gustaitis*  
Unfulfilled promises and new obstacles

**14 Driving People Buggy**

*Marie Gravelle*  
Coastal access goes off the road.

**16 Local Nonprofits as the New Guardians**

A Mendocino coast nonprofit shows the way.

**18 Curfews**

*Linda Locklin*  
No more moonlight walks by the surf?

**20 Take Your Wallet to the Beach**

Fees are increasingly common.

**21 Beach Shuttle Update**

*Hal Hughes*  
An alternative to driving to the beach

**24 Devil's Slide**

*Harold Gilliam*  
Tunnel versus bypass: Much more than road safety is at stake

**31 The Cat Rescue Movement vs. Wildlife Defenders**

*Pat Roberto*  
Whose right to life?

**41 Two Poems by Joanne Kyger**

**DEPARTMENTS**

**2 FROM THE EXECUTIVE OFFICE**  
*On access to the shore*

**3 EBB AND FLOW**  
*Plans for the Sinkyone Wilderness and other recent Conservancy actions*

**42 OTHER SHORES**  
*Hidrovia: A controversial water highway plan threatens the world's largest intact wetlands.*

**44 BOOKS**

**47 LETTERS**  
*Local experts and shark amateurs*



**ON ACCESS TO THE SHORE**

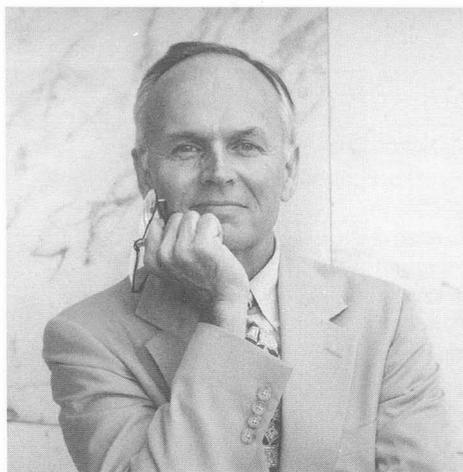
*This is the first column in a series reviewing progress since 1976, when the Coastal Plan was completed. In the next issue we will look at coastal agriculture.*

**I**T HAPPENED 31 YEARS AGO. Sea Ranch was the catalyst.

In 1964 the Sonoma County Board of Supervisors approved a plan for the development of a 5,200-lot vacation home community along a 10-mile stretch of some of northern California's most beautiful coastline.

The marketing plan stressed three things: the unique beauty of the place, the high quality and environmental sensitivity of the architecture and the subdivision layout, and *privacy*. The roads were to be private, patrolled by Sea Ranch's own security; the common areas were to be open only to owners and their guests. Most important, the beaches, bluffs, coves, and tide pools were to be *private*.

That was it: the spark that ignited the movement to "Save the Coast."



The monumental presumptuousness of a development that would block the public from ten miles (!) of public trust tidelands prompted the formation of COAAST, Citizens Organized to Acquire Access to State Tidelands, precursor to citizen organizations up and down the state that placed Proposition 20 on the 1972 ballot and created the Coastal Plan and led to the creation of the Coastal Commission and Coastal Conservancy in 1976.

Do people get emotional about public access to the beach? People do! And how!

Privacy, security, safety, noise, trash: from a resident's point of view, public access brings with it a significant level of threat. And the natural reaction to threat is "fight or flight." Given the beauty of the

coast, fighting over access proposals has been—and will be—common.

People are inexorably drawn to the shore—because it's beautiful, it's fun, and it connects one to the universe. To be blocked off from a place that attracts you so naturally—and so powerfully—provokes anger. And anger, like threat, causes confrontations.

Environmental regulators and the managers of public lands are currently feeling the wrath of a self-styled "Wise Use Movement," which stridently asserts the primacy of the individual landowners' property rights. Conservative politicians of both parties have decried the alleged "taking" of property by environmental regulations. As we watch some of these efforts, we are seeing one of the most basic and important aspects of a democracy under stress: the balancing of the rights of the individual with the rights of the community.

Conflict over access to the shore is a classic example of such a quandary. Both private and public rights exist; the

protection of either must not be allowed to extinguish the other. Balanced resolutions are almost always possible, but they're almost never easy.

So what's happened in the 19 years since the adoption of the Coastal Plan? At **Sea Ranch**, (scaled down to 2,700 units) the situation is long resolved. Five parking lots and trails to the beach coves, sensitively designed and located

to protect security and privacy, strike the appropriate balance. They were built by the Coastal Conservancy and are managed by Sonoma County. The longstanding controversies at **Seadrift** in Marin County and **Sand City** in Monterey County have been—or soon will be—settled. We plan a ribbon-cutting late this summer at our **Cowell Beach** access-

**Democracy under stress: the balancing of the rights of the individual with the rights of the community**

way, just south of Half Moon Bay. The closure of **Fort Ord** will open up a wonderful stretch of beach just north of Monterey. Fences, signs, and guards no longer prevent people from walking along the wet sand in front of the exclusive locked-gate **Malibu Colony**. At the south end of Big Sur, the Conservancy's **Gorda** project will provide a world-class cliff-edge park for viewing elephant seals. Nonprofits have come forward to open access in Mendocino County at **Moat Creek**, **Gualala Bluffs**, and **Point Cabrillo**. As the Conservancy's new *San Francisco Bay Shoreline Guide* explains in loving detail, much of the **Bay Trail** has been completed.

There are relatively few serious public access gaps along the state's coast: **Hollister** and **Bixby Ranches** remain closed in Santa Barbara County, as does **Vandenberg Air Force Base** in San Luis Obispo County (though several public accessways have been provided even in this high-security military installation). Locked-gate communities in Orange

County remain shut, and the public has been effectively excluded from stretches of the Malibu shore in Los Angeles County, especially **Escondido Beach**. UNOCAL's massive, though largely unreported, petrochemical spill at **Guadalupe Dunes** in San Luis Obispo County has made access to miles of beaches problematic. And the selfish actions of an off-road vehicle club at the **Mad River Slough** in Humboldt County have created a significant controversy there (see p. 14).

In the next few years, partnerships between the Conservancy and local nonprofits will become a powerful force in opening scores of new accessways along easements required by the Commission in its permit process. (See p. 16.)

We are also working to realize the grand vision of the **Coastal Trail**, extending along the entire length of our shoreline, linking Oregon and Mexico as the Appalachian Trail links Maine and Georgia. Although few have hiked the entire 2,000-mile length of the Appalachian Trail, its very existence shapes our understanding of a region's geographic and cultural interconnectedness. The Coastal Trail can do the same—and more—for California's magnificent and diverse coast. It can be an economic boon, a grand recreational opportunity, an inspiration.

In the months and years to come, expect us to devote much time and energy to the completion of the Coastal Trail, working closely with our nonprofit partner, Coastwalk. Although this is a time of limited resources, we can realize the vision through partnerships among property owners, local chambers of commerce, new and old nonprofits, local governments, and public agencies. All these entities are made up of individuals; each can play a role. Will you join with us? ■

—Michael L. Fischer



Mendocino County Supervisor Liz Henry with woodworkers' union representatives



RASA GUSTAITIS

Priscilla Hunter, chairperson of the Intertribal Sinkyone Wilderness Council

## NATION'S FIRST INTERTRIBAL PARK MAY BE CREATED IN SINKYONE WILDERNESS

The State Coastal Conservancy has authorized the sale to the Intertribal Sinkyone Wilderness Council of an option to buy nearly 4,000 acres of redwood land in the remote, rugged, and highly scenic Lost Coast of Mendocino County, adjacent to the Sinkyone Wilderness State Park.

The sale price for the entire property will be \$1.4 million. The Intertribal Council has raised over \$100,000 and expects to obtain the remainder through private donations. It will have three years to do so.

The Conservancy's action has opened the way for the creation of the nation's first intertribal park, with public trails to the ocean and many educational and cultural activities.

"In 1986, when the Conservancy loaned the funds to acquire this property, it was anticipated that eventually it would be privately held timberland with public access trails across it and little additional public benefit," said project manager Neal Fishman. "Selling this

property to the Intertribal Council vastly increases its social and cultural value while maintaining the potential for modest commercial timber harvesting."

Dozens of north coast people spoke passionately in support of the action at the Conservancy's March meeting in Fort Bragg's Town Hall, and two representatives of the woodworking and forest products industry spoke with equal passion in opposition.

"We will protect the Sinkyone, provide access to all people, and provide a living intertribal park," said Priscilla Hunter, chairperson of the Intertribal Council.

But Richard Hargreaves, of the Woodworkers Local 469, called the proposal before the Conservancy a "\$1.1-million giveaway to people who have no claim to this land." He said, "Native Americans left this state long before the present ones came to this area."

Liz Henry, vice-chair of the Mendocino County Board of Supervisors, said the board had unanimously supported the Intertribal Council as the preferred recipient of this wilderness property. "There has been a shift in thinking," she said. "There is room for diversification

MARC BEYELER

## Prize for Santa Cruz Hostel

The Santa Cruz Hostel Society, Inc. and the Coastal Conservancy have received the Governor's Historic Preservation Award for the restored Carmelita Cottages in Santa Cruz, which now house an American Youth Hostel. Two structures at the 19th-century homestead have been renovated so far, and work on a third is in progress, with the help of \$373,000 from the Coastal Conservancy. This is Johnson Cottage.



## POINT CABRILLO IMPROVEMENTS

The North Coast Interpretive Association (NCIA) will repair and improve structures in the Point Cabrillo Preserve, repair and restore a 100-year-old farmhouse, and improve public access and interpretive programs with \$533,000 in funds authorized by the Conservancy in June. Of the total, \$325,000 is a grant under the Intermodal Surface Transportation Efficiency Act of 1992 (ISTEA) to restore the Point Cabrillo Lighthouse and construct a public parking area, restrooms, and trail adjacent to Point Cabrillo Drive. The nonprofit NCIA was created in 1992 as a supporting organization to assist the Conservancy in managing the Point Cabrillo Preserve, south of Fort Bragg in Mendocino County.

in the county's economy, and we feel that this first intertribal park will put Mendocino County on the map."

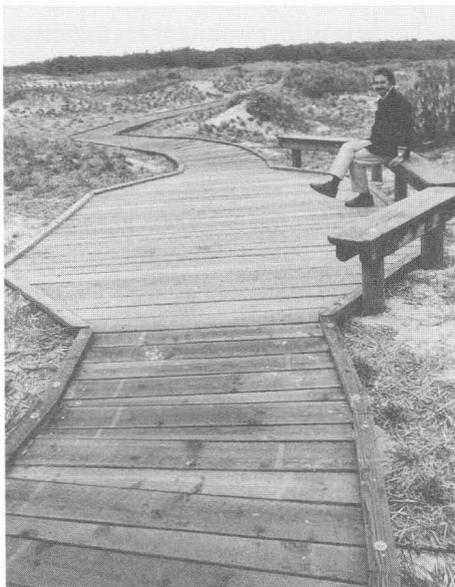
After the county supervisors voted 5-0 in December to support the sale, it was up to the Conservancy to actually authorize it. The land has been owned since the end of 1986 by the Trust for Public Land (TPL), a national conservation trust. Under a complex arrangement, the Conservancy loaned TPL the money to buy the property. The Conservancy and TPL have been working together since that time to develop a balanced approach to the property's future management and to find the right buyer.

The Intertribal Sinkyone Wilderness Council is a nonprofit organization composed of representatives of 10 federally recognized northern California Indian tribes. The Council's goal is to restore the natural and cultural resources of the land and to teach both Indian and non-Indian people about the history, culture, and land stewardship practices of Native American ancestors. The people who lived in the Sinkyone area were either massacred or forcibly removed from the region in the 1850s and '60s.

Under the terms of the Conservancy's action, restrictions will apply to prohibit nearly all development and commercial uses of the land. Timber production will

also be strictly controlled. Several public access trails will cross the property, increasing use of the adjacent state park and the public's ability to get to several spectacular but remote coastal areas.

In a separate action, the Conservancy granted \$2 million to the Pacific Forest Trust to acquire most of the development rights and a conservation easement. The Trust, which is based in Mendocino County, focuses on forestry issues in California, Oregon, and Washington. It will manage, monitor, and enforce the restrictions.



CAROL ARNOLD

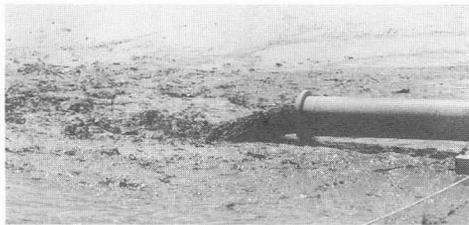
## SAN FRANCISCO WATERFRONT ACCESS IMPROVEMENTS

The Conservancy authorized \$650,000 to the City of San Francisco in June to construct public access and open space improvements at Pier 43, which adjoins Fisherman's Wharf and the ferry to Alcatraz. The project includes new pier pilings and a pier deck, reconstruction of the ferry ramp, and a public information kiosk.

## Oso Flaco Lake Bridge and Boardwalk

Everyone can now hike across Oso Flaco Lake and into the Guadalupe-Nipomo Dunes Preserve without trampling fragile wetland plants and habitat. A 1,050-foot-long bridge and half-mile connecting boardwalk have been completed and were dedicated on April 29. The State Coastal Conservancy provided \$150,000 for the project to the Nature Conservancy. Volunteers, including members of the Telegraph Pioneers of America, built the bridge, and the California Conservation Corps constructed the boardwalk. A causeway from the parking lot leads through a riparian forest and connects with the new access structures. The combined thoroughfare gives walkers, joggers, and wheelchair riders about one mile of easily traversed trail through one of the most scenic areas on the central coast.

U.S. ARMY CORPS OF ENGINEERS



**It May Look Yucky, Even Illegal, but This Is Progress.**

Mud dredged from the Port of Oakland's main shipping channel is now being barged to the Sonoma Baylands Tidal Marsh Restoration Project and piped onto the 322-acre restoration site. It will take another eight months to fill the site and another six months for the mud to consolidate. Tidal flow is expected to be restored to the marsh in midsummer 1996.

**CARPINTERIA MARSH ACQUISITION**

The ten-year effort to restore the wetlands at Carpinteria Salt Marsh took another step forward in April when the State Coastal Conservancy authorized disbursement of \$100,000 to the City of Carpinteria to buy more degraded wetlands. The Conservancy's funds will be matched by \$400,000 from Santa Barbara County to acquire five acres of property along Ash Avenue currently owned by the Cadwell Trust.

**SAN DIEGO'S OCEAN BOULEVARD ACCESS TO BE IMPROVED**

The Conservancy in June approved \$150,000 for access improvements at Ocean Boulevard in Pacific Beach, just north of Ocean Beach in San Diego. The project will include parking improvements, a disabled access ramp, and stairways to the beach. These funds had been previously authorized for the Ocean Beach Pedestrian Accessway, a project that was cancelled.

**INTERPRETIVE CENTER OPENED AT BOLSA CHICA**

Bolsa Chica Conservancy, in partnership with the Department of Fish and Game

**Join the Drive to Save the Coast**

**T**HE COAST NEEDS YOUR HELP. As a California driver, you can make an essential difference. Invest in your beautiful coast by purchasing the newly created California Coastal Protection License Plate. Half the proceeds from the sale of these plates will go directly to support the State Coastal Conservancy and the California Coastal Commission, the two agencies charged with safeguarding coastal resources for the future; the rest will go to the Environmental License Plate Fund for environmental education projects throughout the state.

The Conservancy will use its share of the funds for ongoing public access programs and habitat restoration projects. The Conservancy has opened 65 miles of shoreline to public access (33 miles on the coast, 32 on San Francisco Bay) since 1976, and has purchased almost 33,000 acres for resource enhancement, agriculture, and public access. Some of this land has been passed on to other agencies or into private ownership. It can do much more, at lowest possible cost, if it has the funds.

The Coastal Commission will put its share of your money to work to sustain and expand its Adopt-A-Beach Program and annual Coastal Cleanup Day, recognized in the 1994 *Guinness Book of Records* as the largest beach cleanup in the world. In 1994, more than 40,000 volunteers participated, clearing over 550,000 pounds of trash off California beaches. This year, even more people are expected at beaches and shorelines statewide on September 23.

The Coastal Protection Plate was designed by Wyland, an artist known for his paintings of whales. It is an official license plate issued by the Department of Motor Vehicles (DMV) and costs \$50 above the usual registration fee for the first year, \$40 for renewal.

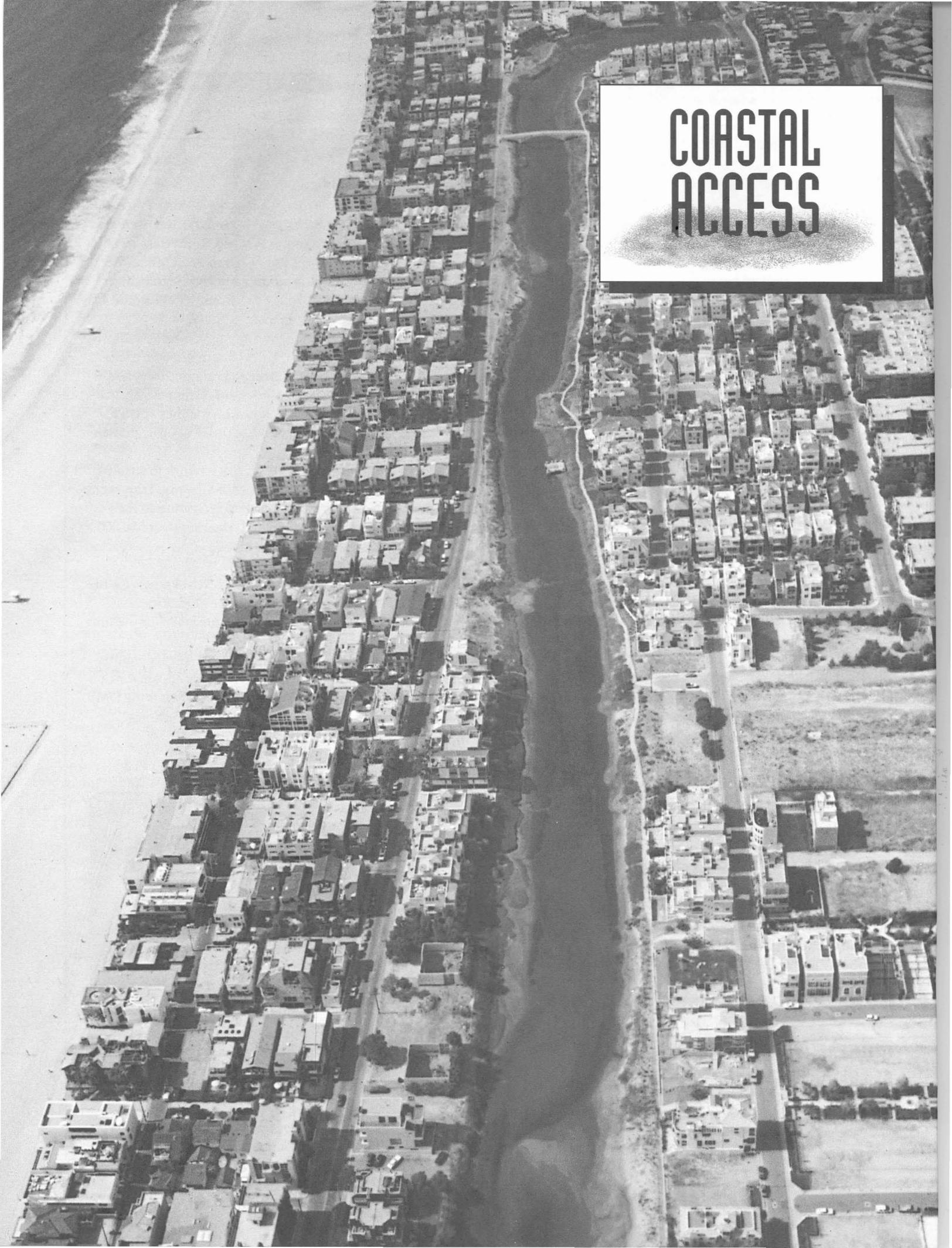
The Coastal Plate will be manufactured and sold only if the Coastal Commission receives 5,000 applications by December 31. Checks will be deposited in a special account until 5,000 applications are counted. Nine months after the DMV receives the applications, it will issue the plate. Renewals will be routinely processed by the DMV.

CALIFORNIA COASTAL COMMISSION



For more information, contact the California Coastal Commission, Public Information Department, 45 Fremont Street, Suite 2000, San Francisco, CA 94105, or call 1-800-COAST-4-U.

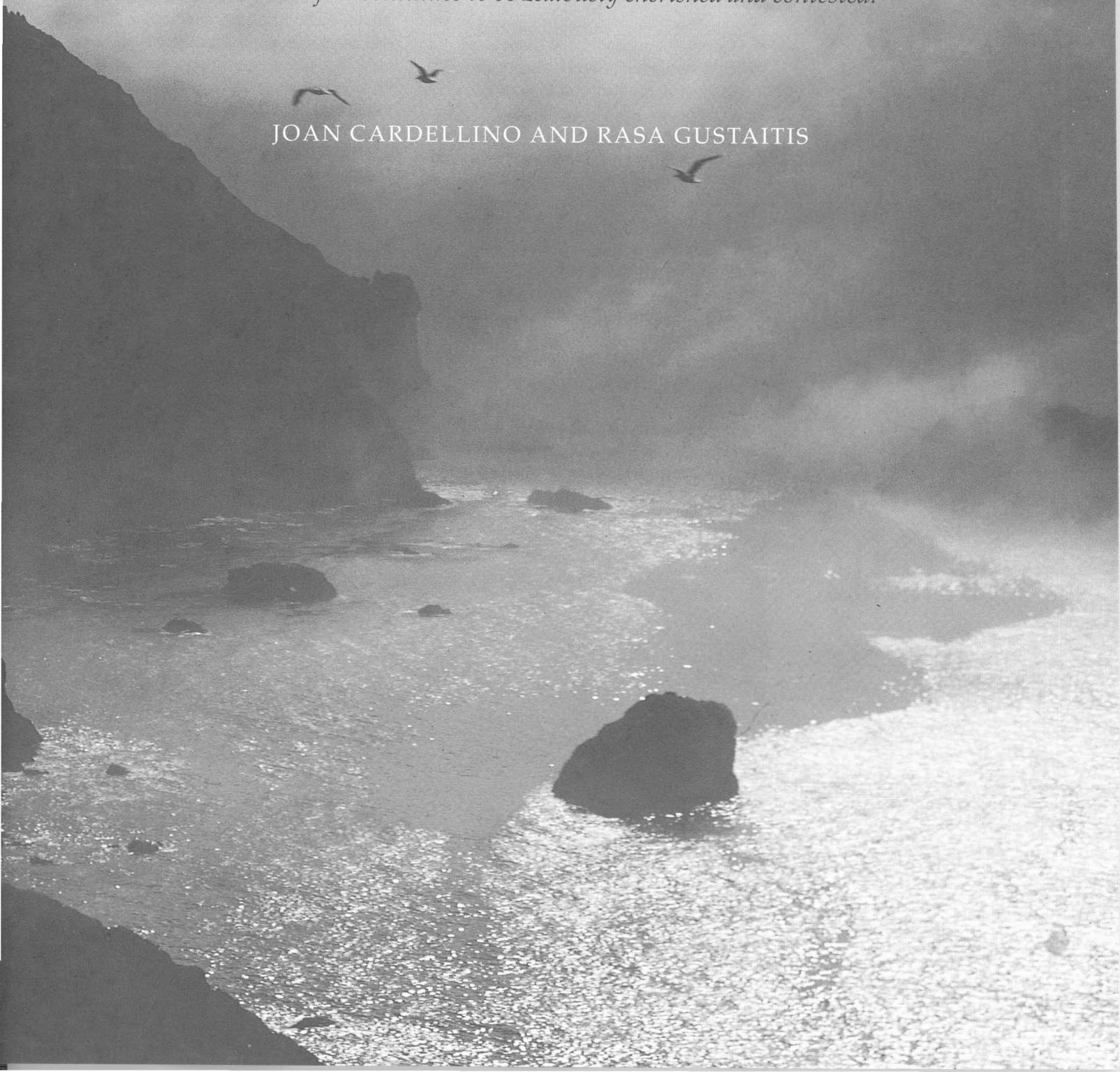
Ebb & Flow continues on page 45

An aerial photograph of a coastal town. On the left, a wide beach meets the ocean with waves breaking. A dense residential area follows the coastline. A large, winding river or canal runs through the center of the town, separating the beachfront from the inland area. The inland area is also densely packed with buildings and houses. The overall scene shows a typical coastal urban layout.

# COASTAL ACCESS

*The California coast is as long as the 10-state stretch of the nation's Atlantic coast between New York and Jacksonville, Florida, and it is as diverse in climate, topography, and culture. Some 85 percent of the state's 32.7 million people live within 30 miles of the ocean's edge, and millions more dream of doing so. The coast not only symbolizes California to the world, it is the state's most important recreational resource and the magnet that attracts a \$44 billion-a-year tourist industry, the state's third largest employer. The right to get to the shore therefore continues to be zealously cherished and contested.*

JOAN CARDELLINO AND RASA GUSTAITIS



# COASTAL ACCESS

## Delivering on a Pledge

## UNFULFILLED PROMISE AND NEW OBSTACLES

**T**WENTY YEARS AGO, California's public schools were good and getting better, most of us could quit a job knowing we would find another, and we packed suntan oil, not SPF 15 sunscreen, for a day at the beach. Hardly anyone was aware an ozone layer existed, much less that it might be developing a hole. We were not afraid to loll happily in the sun, and to work for a better future.

Californians were fighting to protect their right to reach the beach. From the misty redwoods in the north to the bright wide sands in the south, the Save Our Coast movement was in full swing. Private development was locking the public out from entire stretches of the shoreline, and the public had noticed. In 1972, citizens drafted and passed a ballot initiative, Proposition 20, that drew a line in the sand (and across mesas, forests, and mountains), and laid the foundation for the most far-reaching land use law in the country, the California Coastal Act of 1976. It established the Coastal Zone and the Coastal Commission to oversee that zone in keeping with the voters' mandate. Its detailed wish list, the California Coastal Plan, had been

compiled after four years of public hearings and research. The linchpin of the Save Our Coast movement, and of the Act, was public access to the shore.

The Coastal Act stated that "maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse." Every coastal county and city was required to adopt a local coastal plan in keeping with the new state law.

### And now . . .

**I**T'S ALMOST 20 YEARS LATER. How are we doing? Is the voter mandate being delivered?

Much was accomplished in the early years. Previously inaccessible beaches were opened to the public, many new pathways, cliff-top-to-beach stairways, and other shoreline improvements were built. Decrepit commercial piers were reconstructed for recreational use, new fishing piers were built, urban



Pacific Beach, San Diego

RICHARD RETECKI

waterfront wastelands and shoreline dumps were transformed into parks and wildlife reserves. The Coastal Commission and State Coastal Conservancy began to work together to expand coastal access, reporting to the legislature annually on their Joint Access Program. About half the shoreline is now in public ownership, and, aside from military bases and public utility properties, almost all of that is open to the public.

Then California's downward slide began. In 1978, Proposition 13 passed, undermining the tax base of local government by freezing property taxes; in the 1980s, as the economy began to falter, came storms, fires, and earthquakes. These natural disasters were all part of life on the Pacific Coast, but now government had less money to repair the damage. Voters were refusing to pay more taxes, and they rejected bond measures that had traditionally provided funds for expanding and improving parks and recreational facilities, and for protecting natural resources. Along the coast, progress toward "maximum access" slowed nearly to a stop. Even maintaining what now exists is increasingly difficult. Major opportunities to meet future needs of the state's growing population are in danger of being lost.

## No time to plan ahead

The Coastal Commission is charged with overseeing the big picture, but "the major problem is lack of resources," said Executive Director Peter Douglas. The staff is "so preoccupied with time-limited tasks, such as permits, that they don't have the time to look at the larger issues." The Commission is so underfunded it does not even have the capacity to collect from local governments some of the information it needs to monitor whether the access provisions of the Coastal Act are being carried out.

The State Department of Parks and Recreation, which has jurisdiction over one fourth of the California shoreline, is now considering whether to sell some unopened park land. It has dropped plans to acquire properties that had been high on its agenda and are now available at generous prices. "We can't stretch our resources further; the rubber band's about to break," said Carl Chavez, chief of the Department's Northern Division. "General funding support has gone down to 24 percent of our operating costs." It was about 62 percent in 1986.



CHRIS STEVENSON

Along the Ballona Lagoon

Despite these setbacks, there is good work being done.

- Trail systems are being expanded. Along San Diego Bay the 26-mile Bayshore Bikeway is being pieced together. On Monterey Bay, several agencies and jurisdictions are working together to complete the Monterey Bay Coastal Trail. This highly popular trail, now 15 miles long, will eventually run all the way from Point Lobos to the Salinas River Wildlife Refuge and to Elkhorn Slough. "All significant natural features of the Bay would be connected," said Tim Jenson of the Monterey Peninsula Regional Park District. "In the near future we will have 20,000 students at California State University at Monterey Bay [at Ft. Ord], and the trail will go right by the gate." On San Francisco Bay, the 400-mile Bay Trail is 43 percent complete. On Humboldt Bay, a similar bayside trail is in the works. All these are part of the Coastal Trail, which eventually will reach from Oregon to Mexico. As opportunities arise, here and there and bit by bit, the dream of the Coastal Trail is inching toward reality.
- Access for people with disabilities keeps improving, although much more could be done. Wheelchair users can now ride straight into the water at Crown Beach and Coyote Point on San Francisco Bay, at Marina Cove in Ventura Harbor, in Orange County, and on three San Diego beaches. In Sonoma County, the first wheelchair-accessible trail to a rural cliff-top has been built by nonprofit Coastwalk and the Coastal Conservancy. At Tecalote Shores, in Mission Bay, San Diego, a wheelchair-accessible play-

# COASTAL ACCESS

ground is being enjoyed by all kinds of families and children.

- Public shuttle buses and trolleys are in operation in several coastal cities, relieving the discomfort both residents and beach visitors would otherwise experience because of traffic congestion. (See p. 21.)
- With the State Coastal Conservancy's assistance, citizens' organizations are beginning to take on the role of public access stewards in their own communities. (See p. 17.) The Coastal Commission's Adopt-A-Beach Program is helping to keep numerous beaches clean, and helping young people to learn how to value as well as enjoy their coast.
- To make the most of what they have, local governments, public agencies, and community organizations are increasingly working together to accomplish new projects none could undertake alone.

land for access. These offers, known as OTDs, were obtained by the Coastal Commission and local governments from property owners who received permits to develop within the Coastal Zone. OTDs were intended to mitigate the negative impacts of private development on public access. They represent only the potential for access, however; they must be accepted by a suitable agency and opened as actual pathways, stairways, parking lots, or trail segments. If this does not happen, the quality of public access to and along the coast diminishes. The Commission analysis showed that to date only 19 percent of 1,272 recorded OTDs have been accepted. Most of these are in public use, although the Commission does not have actual statistics.

The unaccepted OTDs are worrisome to many coast watchers because they are good only for a specified period of time, usually 21 years. Of the 1,036 waiting to be accepted, nearly 40 percent will expire within the next nine years. Moreover, the longer they go unclaimed, the more likely it is that adjacent property owners will object to their opening for public access. Local governments have shied away from OTDs, largely because they can barely maintain the parks and beaches they already have, but also because of political pressure from nearby residents who would just as soon not have the public passing by. The Coastal Conservancy has, in some cases, persuaded local sponsors to accept OTDs by providing funds for capital improvement. But the Conservancy's current budget has zero funding for trail construction. To prevent them from expiring, the Conservancy recently agreed to accept all outstanding OTDs as an agent of last resort. This would not enable the public to use these potential pathways immediately, but it would keep the easements current.

The easements at issue are typically ten feet wide. Of those recorded, 11 percent are "vertical," from the nearest road to the shore, 73 percent are "lateral," along the beach or blufftop, and 16 percent are for trails (in the Santa Monica Mountains, for instance). Before they can be used for public access, they typically require some capital outlay. Trails or stairways may have to be built, and parking sometimes needs to be provided. Then someone must assume responsibility for managing these facilities.

The Coastal Act provided that public access be distributed along the shore as



JOHN OLMSTEAD

Independence Trail at Jughandle Farm, Mendocino County

Signs of trouble ahead are mounting, however, and it is on one of the most urgent problems that we now focus.

## Unclaimed public rights-of-way

A RECENT STAFF REPORT to the Coastal Commission stated: "The people of California have been burdened by the impacts of additional development along the coast (i.e., increased roadway traffic, lost or blocked views, etc.) but have not yet benefited from the public access improvements that are intended to mitigate the impacts from this development."

That statement was based on an analysis of offers to dedicate easements across private

evenly as possible, so that no area would be unduly impacted. Of the unaccepted OTDs, 378 are in Los Angeles, almost all along the 26-mile shoreline of Malibu. Mendocino County has 134 unaccepted OTDs, the second highest number among the 15 coastal counties.

## Keeping the public out

**A**THOUGH MALIBU IS KNOWN worldwide for its beaches, the public has to walk miles along the shore to reach some of them. Property owners, especially those with homes fronting the beach, have fiercely opposed more public access. They moved here to be on the beach, their own beach. In some areas, their houses—very expensive houses—form a solid wall against the Pacific Coast Highway, constituting a *de facto* locked-gate community.

In 1980, the Zonker Harris Accessway (named after the Doonesbury character addicted to tanning) was opened east of Malibu Pier, and a carved redwood “Coastal Access” sign was erected. Within 24 hours, someone doused it with paint thinner and wrote “LA Go Home” in the running paint.

While some residents fear that public pathways will bring hordes of youths with boom boxes from inland Los Angeles, those who most wish for these accessways may be neighbors just across the PCH. Kay Furger-son, who lives on Winding Way, could have walked right across the road and down to the beach with her grandchildren, had the

access easement near her home been opened. (Instead she has been taking the grandchildren to private Paradise Cove, paying \$15 just to park.) This particular easement, one of three leading to Escondido Beach, has been accepted by the Coastal Conservancy. It remains closed because no entity has been willing to manage it. The only public access to this mile-long beach is at each end of it.

Another Winding Way homeowner, Joe Kanehann, points out that the easement predates the construction of the adjacent homes. “I think it’s awful. I completely sympathize with people not wanting the public tracking through their property. But when you buy a property knowing of the easement, sooner or later you have to pay the price. I know the property sells at a lower price because the easement exists.”



FORD LOWCOCK



FORD LOWCOCK

Fishing in Malibu: the California Constitution guarantees access to the state's tidelands for all people.

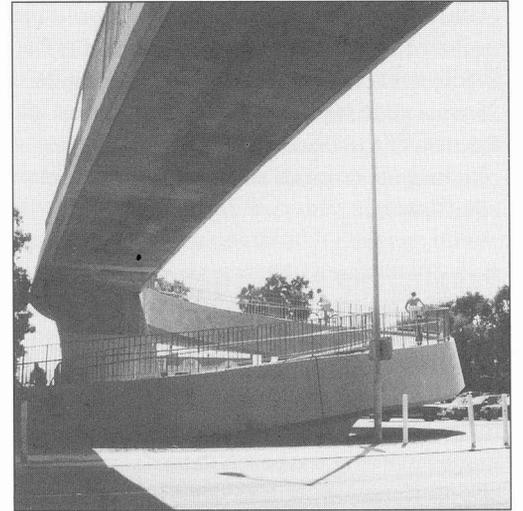
## COASTAL ACCESS

The Conservancy and Commission have been to many public meetings, and to court in their attempts to enable people who don't own a house on the beach to reach the public shore. Hope now glimmers: the Santa Monica Mountains Conservancy has agreed to take over and manage three of the Malibu easements, including the one nearest the Furgerson home.

In 1984, three state beaches were opened in Malibu: La Piedra, El Matador, and El Pescador. The Coastal Conservancy provided funds to build accessways to them. State Parks has lately been considering whether to sell El Sol State Beach, which has not been opened.

The failure to open new accessways along the offered easements places a disproportionate burden on coastal communities that do provide public access. This appears to be one of the factors that has prompted some cities and counties to seek to limit public use of beaches by establishing curfews, exclusionary parking regulations, and other restrictive methods. (See p. 18.)

Los Angeles County has not picked up the gauntlet thrown by Malibu's beachfront residents, partly because of hesitation to commit its scarce resources to a bitter and probably costly fight. In Mendocino County—the county with the second highest number of unaccepted OTDs—meanwhile, the issue is not so much controversy as government poverty. This county does not even have any park personnel, though it has county parks. “We have major fiscal difficulties. Liability issues have also become difficult for government. I can't see that situation changing,” said County Supervisor Liz Henry. “Also,



**Pedestrian overpass crosses Pacific Coast Highway, Santa Monica**

we're an area where there is substantial access to the ocean, so there isn't the same frustration there might be elsewhere.”

San Luis Obispo County, in contrast, sees OTDs as opportunities to develop facilities that improve quality of life for residents and also bring economic benefits by appealing to visitors from outside the county. It is accepting all 130 outstanding OTDs to make sure they stay “in the bank,” even if they can not be opened for a while. Supervisor Laurence “Bud” Laurent said he does not understand why other jurisdictions don't jump at the opportunity to do likewise. He hopes to find community groups that will adopt the accessways.

Local citizen stewardship may, indeed, be the most promising approach at this time. A model already exists in Mendocino County, and is being emulated elsewhere, in cooperation with the Coastal Conservancy. A local land trust has taken over management of two creekside pathways to a popular surfing and abalone diving spot in southern Mendocino County (see p. 16). The Redwood Coast Land Trust accepted lateral blufftop easements on the Gualala River. In Trinidad, a trail has been managed for years by the local Humboldt North Coast Land Trust. The Conservancy has a long record of helping local people to organize land trusts that can manage public access. (Local volunteers can also help short-staffed agencies that are responsible for shoreline access. In San Mateo County, for instance, residents of Cañada Cove Mobile Home Park help to monitor the trail and shore of Cowell Ranch Beach.)

### Stinson Beach

NAOMI SCHIFF



It would be unrealistic, however, to expect community groups to do the whole job that needs to be done if the public is to get the "maximum" shoreline access promised in the Coastal Act and embodied in the offers to dedicate easements. To develop a parking lot or trail and maintain it requires funds, and the cupboards of public agencies and local governments are being stripped bare.

## Interspecies conflicts

**O** TDS ARE A PRINCIPAL CONCERN among coastal access watchers, but other issues are also demanding attention. Territorial conflicts that pit different kinds of coastal users against each other (OHV riders against hikers, for instance. See p. 15) will intensify as the state's population keeps growing and its demographics keep shifting. The same is true of conflicts that require choices between human and other species' need to use the shore. Sea lion, sea otter, and elephant seal populations have, with legal protection, increased in size. In San Luis Obispo County, elephant seals have established themselves below eroded bluffs, and people pull off Highway One to watch them. County Supervisor Laurent said some ignorant people have harassed the huge animals and behaved foolishly (putting children on their backs, for instance), not understanding the danger involved. The elephant seals could become a welcome visitor attraction, as sea lions are on San Francisco's Pier 39 (see last issue of *Coast & Ocean*), where the Marine Mammal Center provides docents to answer visitors' questions and there is good signage. But when local governments are straining to meet basic expenses, even putting up interpretive signs may be difficult.

The Coastal Act provided that Californians share their coast with native wildlife. This is a concern in every Conservancy access project. This year, for instance, a wooden bridge and boardwalk were built across Oso Flaco Lake, in the Nipomo Dunes of San Luis Obispo County, to allow people to enter the dunes without disturbing the plants and animals in and around the lake (see p. 4). "It puts birders and fishermen elbow to elbow," said Lynn Lozier of the Nature Conservancy, which manages the Guadalupe-Nipomo Dunes Preserve. "The real challenge is to get all the people who care about the coast to work together and acknowledge that it will take all our efforts."



MICHELLE VIGNES

The Nature Conservancy has undertaken an extensive public education campaign in the community.

Pebble Beach, San Mateo County

## What's ahead?

**T**HESE AND OTHER COASTAL ACCESS problems are being addressed by agencies that are trying to pool their resources, trying to consider issues on a regional basis, rather than separately, and attempting to do more with less. The Coastal Conservancy is taking a lead role in bringing community groups into these emerging partnerships. As there is little prospect that new funds for land acquisition will materialize in the near future, public lands are likely to be the focus for access expansion in the coming years. Nonprofit organizations are likely to be partners where new accessways are developed on easements. Whether "maximum access" is provided in the years to come depends on the vigilance and support of California's citizens. ■

*Joan Cardellino manages the Coastal Conservancy's Access Program. Rasa Gustaitis is the editor of California Coast & Ocean.*

## COASTAL ACCESS

# Driving People Buggy



## COASTAL ACCESS GOES OFF THE ROAD



MARIE GRAVELLE



NORTH COAST JOURNAL

The widened trail/road on dune buggy club property is clearly visible on this aerial photograph taken by the Humboldt County Public Works Department.

PULLING ON THEIR BACKPACKS and grabbing their walking sticks, two Spanish-speaking tourists recently turned down a path to the Mad River Slough and Dunes, which extend along the sandbar that separates Humboldt Bay from the ocean and is known as the North Spit.

They wanted to see a forested dune and beach area that is known as one of the best places along the northern California coast for viewing wildlife.

"¿A la playa?" they asked. To the beach?

"No, you can't go in there," came the polite but firm response from a member of a Eureka-area dune buggy club. Leaning against his pickup truck, the off-roader pointed to a half-dozen signs reading "No Public Access" and "No Trespassing."

"You have to go somewhere else," he said. After some arm-waving, the tourists left.

For years visitors and locals followed different signs—signs that read "Coastal Access" and led from the nearby highway to trails that wound down to the Mad River Slough, up into dune forests, and across mountains of sand to the ocean.

Not anymore. There is no more direct public access to this beach, a two-minute drive from Eureka, the largest northern California coastal city. To reach this part of the shore now you must walk four to five miles from

either the north or the south, following the strand. And there's no way at all you can visit the dune forest or picnic in the warmth of the wind-sheltered dunes. Many people are unhappy about that; some had been using the dune trail since the early 1980s.

Senator Mike Thompson, who represents the Eureka-Arcata area in Sacramento, has pleaded with constituents to solve the problem. His office has been inundated with complaints from the public. "It makes me crazed. I can't believe they can do this," said Liz Murguia, Thompson's Eureka-area spokeswoman. "We used to take our family there."

Until recently, the trail and nearby dune property were owned by Louisiana-Pacific Corp. (L-P), a large timber firm with a pulp mill nearby on Humboldt Bay. The land was managed as the Mad River Slough and Dunes Cooperative Management Area by Louisiana-Pacific and other area landowners, including the U.S. Bureau of Land Management (BLM) and the private Nature Conservancy. They worked cooperatively with the State Coastal Conservancy to keep the trail open, restore the dunes, and protect threatened plant life.

Over the past several years, dune buggies and other off-road vehicles have become a big problem on the North Spit. Up and down

the Spit, off-roaders were riding on dunes and beaches. Sometimes, a person strolling along the ocean could barely hear the crash of the waves over the roar of engines in the hidden foredunes. When beachgoers began complaining several years ago, the Humboldt County Sheriff's Department became concerned—not about levels of enjoyment, but about safety issues.

In 1990, the Coastal Conservancy agreed to kick in half the money needed, about \$80,000, to develop a Beach and Dunes Management Plan for the North and South Spits of Humboldt Bay. The other half came from the Off-Highway Vehicle Commission, a division of California State Parks.

Five years of public hearings were held. Each hearing seemed to focus almost entirely on off-road issues. "We got letters, and they were nine-to-one against off-road vehicles," said Humboldt County Supervisor Julie Fulkerson.

The plan that emerged restricted off-road vehicles severely, confining them to a BLM park at the tip of the North Spit, a strip of private city property nearby, and a 40-acre area slightly north. The County Board of Supervisors adopted the plan in June 1994 and it became law. Only one supervisor, Anna Sparks, voted against it.

Most people thought the issue was resolved—until they learned about the end-run deal that involved Sparks, timber company officials, and members of a private off-roaders club.

As the county plan was being reviewed by the California Coastal Commission, members of the Humboldt Buggy and ATV Association, Inc., stunned many of those in attendance by announcing they had purchased the 160-acre Louisiana-Pacific dune property near the Mad River Slough for \$225,000—despite the fact that the Nature

Conservancy had been negotiating with L-P to acquire the same parcel with the Coastal Conservancy as part of the implementation of the newly approved management plan.

As soon as escrow closed, so did the gate over the trail. The years of work that had gone into creating the cooperative management agreement for the Mad River Slough and Dunes became null and void.

The off-roaders now have their private property and feel, as one club spokesman said, "the public doesn't deserve to use it." Supervisor Sparks, for her part, is no longer an elected official. She now works for Louisiana-Pacific.

Buggies, four-wheel drives, and quad runners are now buzzing the area again. Club members, according to some county officials, are flouting not only county law but also the California Coastal Act. "What the riders have done is essentially created a barrier around themselves so their illegal activities cannot be observed," said Frances Ferguson of the Humboldt Coastal Coalition, which has been battling against off-road use of beaches and dunes for years. "And they've cut off traditional public access to do that."

Sheriff patrols don't typically go onto private property, so the county's off-road restrictions aren't being enforced. Aerial surveys by the county show the buggy riders may have built a road through their property. The county has notified the new owners that the gate they have erected is a form of development, requiring a permit, and has met with agencies that have jurisdiction in this area to consider what to do next. There is little doubt the issue will land in court. Meanwhile, the public may not see these exceptional forested dunes for some time. ■

*Marie Gravelle is a staff writer for the North Coast Journal.*



**Buggy riding on the club's property, despite county ban on all-terrain vehicles in this area**

# COASTAL ACCESS

## Local Nonprofits as the New Guardians



WITH MAJOR NEW EXPENDITURES for public access unlikely, some local nonprofit land trusts are taking on the responsibility of managing paths to and along the shore. The State Coastal Conservancy has enabled them to do so by accepting offers to dedicate easements (OTDs) in their communities.

The nonprofit all-volunteer Moat Creek Management Agency now operates a creek-side trail to one of the best surfing and abalone diving spots in southern Mendocino County, along with a trailhead parking lot. The Conservancy helped this land trust to get started and is backing it up with a guarantee that if it goes out of existence or somehow defaults, the Conservancy will assume responsibility for the accessway.

At the mouth of the Gualala River, also in Mendocino County, the Redwood Coast Land Conservancy, formed in 1992, plans to build a trail between the town of Gualala and a blufftop, using three OTDs, with Coastal Conservancy assistance. Mark Massara, director of the Sierra Club's Coastal Campaign, is trying to persuade local chapters of the Sierra Club to take on similar projects. "There has never been a better time to get

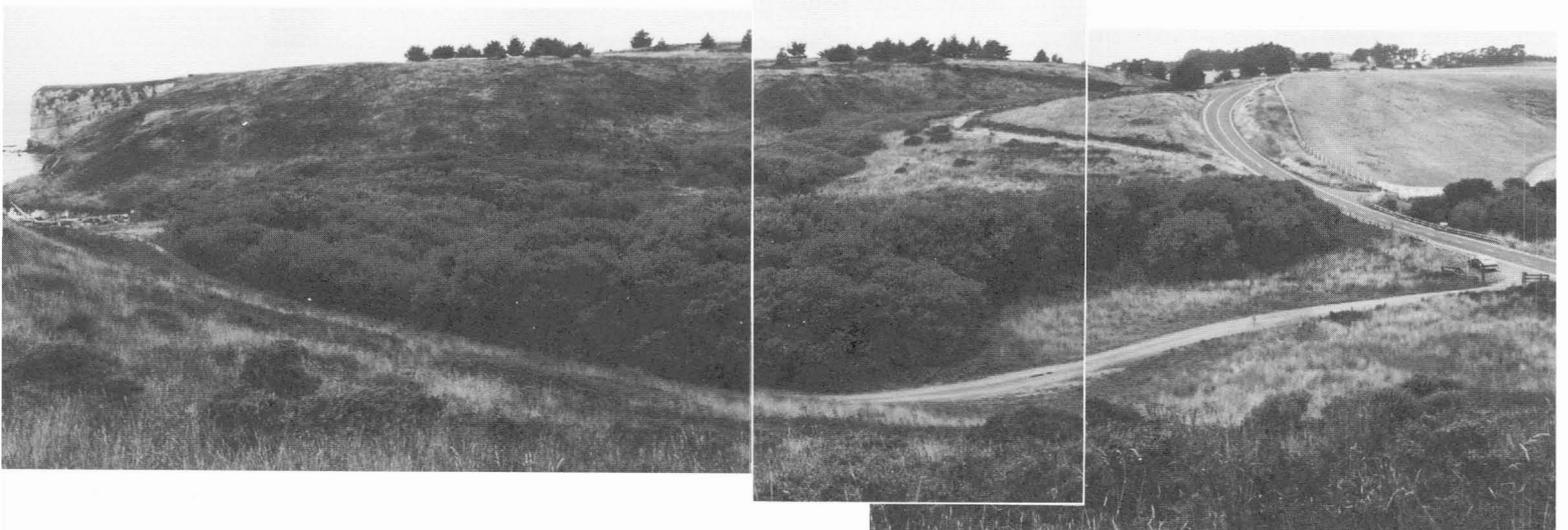
involved and get organized. I'm really bullish on these OTDs," he says.

Mendocino County Supervisor Charles Peterson, member of the board of directors of the Moat Creek nonprofit, believes that such groups are uniquely qualified for the necessary task. They know their community, care about it, can tap local resources, and reap the rewards of seeing a trail well kept.

The Moat Creek nonprofit evolved in response to the temporary closure of the popular creekside trail in 1981. For years surfers, abalone divers, and others had used this trail, paying a small fee to a rancher to cross his land. Then, in 1981, the Coastal Conservancy bought the property to protect it against an unsuitable development that had been approved before the passage of the California Coastal Act. While plans for future use were taking shape, the trail was closed. The agency later sold most of the land for a much smaller development, maintaining 14 acres along Moat Creek and nearby Ross Creek to protect riparian habitat and provide public access.

Local residents offered to improve and maintain trails along both creeks under the umbrella of the nonprofit Surfrider Founda-

TERRI NEVINS



A three-frame view of the Moat Creek Trail

tion. In 1989 the Conservancy signed a contract with Surfrider and also provided \$48,000 to improve the Moat Creek access and to protect and restore riparian habitat that had been destroyed by vehicles driving off the trail.

A group of about a dozen volunteers put up vehicle barriers and built a gate to keep vehicles from driving beyond the parking lot, erected signs, restored vegetation along the creek, and made other improvements. Ever since, they have maintained and monitored the Moat Creek trail, as well as a smaller trail along Ross Creek, with the help of students from a local elementary school who pick up litter as part of the Coastal Commission's Adopt-A-Beach program. Last year these stewards of Moat Creek organized as a local nonprofit and signed a new contract with the Coastal Conservancy. They joined the Land Trust Alliance and, through the Alliance, bought a group policy that reduced their insurance costs.

The Conservancy contract permits the Moat Creek group to charge an access fee of up to \$2, but it has not done so. It has proudly, "through direct gifts and donations, provided low-key public access at a

time when most free access to the coast is being lost," Peterson explained. Volunteers sometimes ask for donations, especially from abalone divers during low tide, and some gifts have been generous.

Peterson has noted that abalone poaching has almost disappeared at Whiskey Shoals, offshore at Moat Creek, and that illegal campfires have become rare. Creekside vegetation has come back. "People have gotten the message," he said. "It would be a mistake to say [that managing an accessway] is easy, but it's good work and intensely rewarding."

The Moat Creek group is now looking into possibilities for picking up OTDs elsewhere in Mendocino, and perhaps in Sonoma County. "But we would need some funds," said Peterson. "We can do a lot with volunteers, but there are the costs of initial development and—if we take on a longer stretch—of insurance. That would have to come from somewhere." ■

—RG

*For more information, call Bryan Thurmond at the Moat Creek Management Agency: 707-884-1300; or Joan Cardellino, access program manager at the Coastal Conservancy: 510-286-1015.*

*Richard Beban often walks to work in Santa Monica from his home in Venice. He offers a typical beach traffic report:*

# A COMMUTER'S REPORT

**T**HE SEA AND SKY WERE BOTH GRAY, the sky a little lighter, though they merged at the horizon and were almost indistinguishable. It gave the view to the west an unreal, vertiginous feeling, as if when you got far enough up, up became down and vice-versa.

The early morning tide must have been inordinately high. The sand was pushed and pounded into high berms, with long, smooth, concave slopes where the waves had beaten against their creations, then receded.

At irregular intervals along the beach, huge clumps of uprooted kelp and seagrasses lay like exhausted aliens. I was reminded of George Pal's 1950s science fiction movie *War of the Worlds*, in which Martians were defeated by Earth's poisonous atmosphere and lay where they were stricken. The plants were of many shapes and kinds, brown, red, and green in color.

Some had large bulbous bodies with long slender whips. Still others looked like divots of two-foot long grass, in shades of lime green and yellow. One huge clump, which lay in an arc like a wino curled in a doorway with his back to the sea, was made up of all of these kinds and more, a half-dozen varieties woven together as if for comfort.

The shore was alive with flocks of birds incessantly tap-dancing a heartbeat ahead of the waves. . . .

# COASTAL ACCESS

## CURFEWS

## NO MORE MOONLIGHT WALKS BY THE SURF?

LINDA LOCKLIN



RICK HYMAN

**M**ORE AND MORE COASTAL communities, especially in southern California, have been trying to exclude the public from beaches, beach parking lots, and accessways during nighttime hours. The most frequently cited justification is crime, even where no evidence exists of a link between beach use and criminal activity.

The Coastal Commission, which must grant permits for any proposed limits on coastal access, has scrutinized each request with great care. For aside from any questions about their effectiveness in preventing crime, beach curfews exact a heavy price from everyone. By rendering the beach off-limits after designated hours, they keep fishermen from casting their lines into the surf at night and rob everyone else of the opportunity to stroll along the shore by starlight. Residents who live along the coast because they love the beach must confine their enjoyment of it to designated hours.

In reviewing requests for curfews, the Commission has weighed the hazard posed by real or potential criminal activity to public safety, resource protection, and property rights against the public's right of coastal access. Some commissioners also posed the question: If streets and schools are not closed because crimes have been, or could be, committed there, why should public beaches be closed for that reason?

If a local government deems it necessary to close a beach temporarily to protect public safety, it may do so without any involvement by the Coastal Commission. However, the indefinite or long-term closure of public beaches and denial of access to state waters raise serious conflicts.

Although public safety and lack of funds for police protection are given as reasons for such actions, the real reasons are often more complicated. In some communities, such curfews have been used to keep nonlocals out of beach neighborhoods. Where the only parking available to nonresidents is at the beach, the closing of a beach parking lot in effect excludes nonresidents. In some instances, early-closure proposals stem from complaints by local residents about traffic and noise caused by beach visitors. Such cases present a clash of interests between those who live near a beach and those who travel to the beach for recreation.

Until mid-1993, curfews were not much of an issue along the coast. Almost all beaches and parking lots were open 24 hours a day. Then the city of Long Beach passed an ordinance that shut down its 11-mile beach at 10 p.m. and reduced hours at most beach parking lots. It did so in the name of public safety after a murder was committed on a public street near a beach.

The Commission found that closing all the beaches in the city to all public use at 10 p.m. in perpetuity was not warranted under the circumstances. The city sued the Commission and three bills were introduced in the State Legislature to remove Commission jurisdiction over curfews. Both the suit and the bills were eventually dropped. The city kept the midnight-to-5 a.m. beach curfew as it had existed since before the Coastal Act, and agreed to permit fishing and other tide-land uses at all times.

Also in 1993, the city of Coronado sought to establish a curfew on North Beach from 11 p.m. to 4 a.m., prohibit beachfront street

Above, sunset in Santa Cruz

parking from 10 p.m. to 4 a.m., and remove 10 of 18 fire rings to reduce the crowds that tend to gather around beach bonfires. After Commission staff expressed reservations, the city settled for a more limited curfew, which closed 500 feet rather than 2,500 feet of the beach to public use after 10 p.m. Ten fire rings were removed, and street parking was prohibited in front of the closed beach area. Access to the state tidelands was not restricted.

Whether curfews improve public safety is by no means certain. San Diego's request for a permit to reduce nighttime hours at two beach parks and several parking lots was not seen as a valid crime prevention technique by city law enforcement officials. The police commander told the Commission that crime statistics did not justify closure of South Mission Beach Park and Mission Point Park between 8 p.m. and 5 a.m. He noted that a curfew does not solve crime, it just moves it elsewhere, and expressed concern that early closure could create greater public safety problems by reducing the number and geographic distribution of places where inland residents can go in the evening for coastal recreation. The Commission approved closure between 10 p.m. and 4 a.m., taking into consideration the evidence presented by the city and local neighbors and the need to provide general public access.

In June 1994, the Commission denied a request from the county of Santa Cruz for a permit to close the Oceanview blufftop stairway to Manresa State Beach between 10 p.m. and 6 a.m. The stairway had long been used by the public and had not been shown to be a scene for any criminal activity.

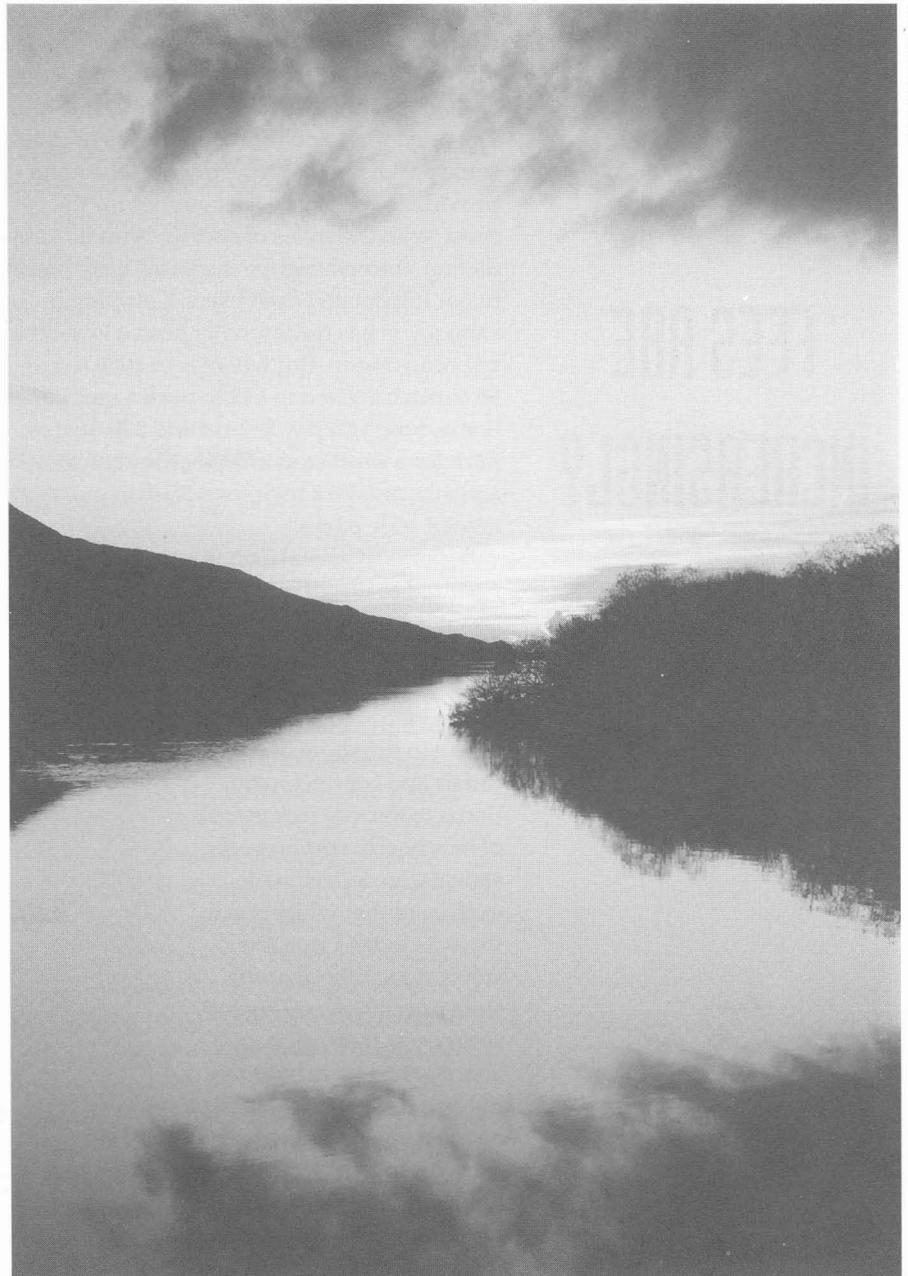
In struggling with these and other curfew proposals, the Commission has considered each case individually, weighing numerous factors: Have alternatives to closure been explored? Do alternative beach access opportunities exist nearby? Is the proposed closure long term or temporary? Are all public uses or only some uses prohibited? Does the closure give preferential treatment to local residents at the expense of visitors? Are concerns over public safety legitimate or are they merely an excuse to privatize a coastal neighborhood's amenities?

In many areas along the coast, law-abiding citizens use beaches at all hours for fishing, swimming, scuba diving, walking and jogging, socializing around bonfires, camping, boat launching, and surfing. Their legal right

to do so should be curtailed only in very narrow and compelling circumstances. Unfortunately, urban communities now face serious problems that involve violence, vandalism, and theft. How we, as a society, respond to these problems will help shape our future. Because we are a democratic people who cherish our fundamental freedoms, we must be careful not to trample on the rights of honest citizens in our zeal to ensure public safety. ■

*Linda Locklin is public access program manager for the California Coastal Commission.*

#### Marin Headlands, Golden Gate National Recreation Area



EDWARD THOMAS

## COASTAL ACCESS

# Take Your Wallet to the Beach

## FEES ARE INCREASINGLY COMMON

USER FEES ARE BECOMING INCREASINGLY COMMON along the coast, as they are throughout California. As tax bases diminish and costs keep rising, government agencies are forced to look for alternative funding sources, and payment for services is among the first options they choose. In the past several years, the Coastal Commission has seen various proposals to raise beach parking fees or impose fees where none existed before. The proliferating and increasing fees are putting new limits on beach access; they are also bringing new issues and burdens to coastal communities.

A major impetus toward higher fees was the \$16 million budget cut the legislature imposed in 1990 on the State Department of Parks and Recreation. The legislature directed the department to raise user fees or impose them where they did not already exist to compensate for the funding shortfall. The only other apparent option was to close some parks. As the department is the main provider of public beach facilities for the coast, with 260 miles of shore within its jurisdiction, the ensuing fee increases have had a major impact on beach users. Camping in state parks has traditionally been a low-cost vacation option. But whereas in 1986 it cost \$6 to pitch a tent and \$12 to park a mobile home, now you pay \$12–14 and \$20. Just to park for a short stop to enjoy the view, have a picnic, or take a hike costs \$5–6 in most coastal state parks.

Because a Coastal Commission permit was required to install iron rangers (structures for collecting fees), hearings were held. Many citizens argued that since the California Constitution guarantees public access to the shore, it was unfair and/or unconstitutional to impose fees for use of beaches. In response, the state parks department explained that while beach use was indeed free, the support facilities that the state provides (parking lots, restrooms, trash pickup, accessways) have both initial and long-term maintenance costs. Entrance fees do not apply to pedestrians or bicyclists, only to motorists, whose impact on these facilities is greater.

Low-cost passes are available for the elderly, disabled, and low-income people. (Cities and counties that charge for beach parking also usually allow people to walk in for free.)

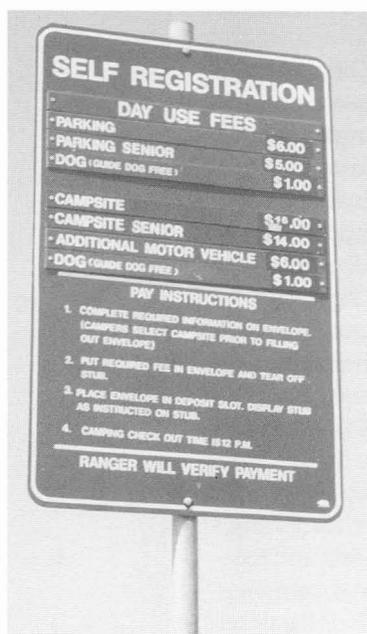
After the Commission approved the iron rangers, the Surfrider Foundation filed a lawsuit against the Commission charging that the installation of these devices was inconsistent with the public access and recreational policies of the Coastal Act. The state Court of Appeal upheld the Commission's action; it also found that the Coastal Act should be broadly construed to give the Commission permit jurisdiction over virtually any impediments to public access, whether direct or indirect (i.e., fees).

With no relief from fiscal constraints in sight, both state agencies and local governments are likely to see no alternative to introducing and raising entrance and use fees for public facilities, especially in the busiest areas. The California Department of Fish and Game has begun to collect fees from non-hunting visitors to some of their wildlife refuges, including Elkhorn Slough in Monterey County (\$2.50 for adults). The Commission has reviewed many proposals from local governments to install paid parking for beach users—most recently in the city of Del Mar. The city's proposal was approved but limited to one year, and the city was required to monitor any public access impacts.

User fees for public access facilities can be self-defeating, in the same way that public transit fare increases tend to be. These facilities were built with public funds for everyone's benefit. As the price for their

enjoyment rises, fewer people use parks and beaches. As the number of users decreases, the constituency for their support also shrinks. In the end, everyone loses. It is more cost-effective, in the long run, to keep user fees low so everyone can afford them and therefore come to know them, and then, when asked, will willingly support the funding needed to maintain them. In this way we make sure that everyone can continue to enjoy the coastal access Californians so value. ■

—Linda Locklin



LINDA LOCKLIN

**Y**OU DON'T NEED TO BE STUCK in traffic, or circle endlessly in search of off-street parking, if you take public transit to the beach. Seven coastal communities now operate beach shuttles to reduce vehicle congestion and air pollution, support the tourist economy, and provide youth and the elderly a way to get to the shore without depending on someone else to drive.

In 1988, when we first reported on this subject (Vol. 4, No. 3, of this magazine, then called *California WaterfrontAge*), there were seven publicly run shuttle services between San Diego and Santa Cruz. San Diego's *Sun Runner* and the Santa Cruz Shuttle are no more, but a trolley has been added in Morro Bay. Most of the other services have gone through significant changes, for better or worse. Some have been expanded and now provide public transit to destinations other than the beach.

### **Santa Barbara Shuttle**

**T**HE MOST SPECTACULARLY SUCCESSFUL is the Santa Barbara electric shuttle, part of the Metropolitan Transit District's Electric Bus Project, designed to serve residents, commuters, and tourists and also to help keep the air clean. (A single electric bus replacing a diesel bus can reduce air pollution by five tons a year, according to the Santa Barbara Metropolitan Transit District.) The service operates year-round, seven days a week (except for four holidays), running every 20 minutes during the summer and every half hour the rest of the year between outlying parking lots, the harbor, and Stearn's Wharf.

When the custom-designed shuttle buses were introduced in 1989, rides were free of charge. Before long, 100,000 passengers a month were being counted, many of them riding for pleasure and crowding out commuters and residents. According to Jay Hillje, the City Contract Administrator who coordinates the operation, a minimal fare of 25 cents was introduced to deter enough



RASA GUSTAITIS

# Beach Shuttle Update

riders so the system's public transit function could be preserved. The shuttle remains extremely popular.

### **Santa Cruz Shuttle**

**T**HE SANTA CRUZ SHUTTLE was discontinued this year because of declining ridership. The city is now reviewing the future of this service.

### **Monterey—The WAVE**

**T**HE FREE SHUTTLE SYSTEM inaugurated in 1984 has been superseded by an expanded service, the WAVE (Waterfront Area Visitor Express). It operates daily during the summer, supported by public agencies, local businesses, and the Monterey Bay Aquarium.

The WAVE began four years ago with service from the aquarium to Monterey Transit Plaza. Two years later, the transit district extended the service to Pacific Grove and Del Monte Shopping Center. Posters and brochures are distributed to hotels, parking garages, and tourist destinations throughout the area, and ride vouchers and discounts are frequently offered. The \$1.00 adult fare allows you to ride all day, and serves as a discount voucher for other MST buses; MST tickets allow you to ride the WAVE free. You can now board a MST bus in Carmel, pay \$1.25 for a ride to Monterey, ride the WAVE, then use your WAVE pass for a \$1.00 discount on the return fare to Carmel—that's \$1.50 for a round trip.

Above, Mary Sanders with the WAVE bus she drives

# COASTAL ACCESS

## Capitola Shuttle

THE CAPITOLA SHUTTLE has been running every half hour during the summer since the mid-1980s, from a parking lot near Highway 1 to Esplanade Park near the beach. It is free of charge, but there is a \$3 fee for parking in the lot (\$5 for some special events).

## Agoura Hills Summer Beach Bus

THE AGOURA HILLS Summer Beach Bus was introduced to serve primarily as transportation to Azuma Beach for teenagers who don't drive. It makes four pickups at four designated stops each day, and four return trips, between 8 a.m. and 6 p.m. The stops include Agoura High School and Middle School and two other convenient places where parents can drop off their teens. The 50 cent one-way fare supplements funding from Proposition A, the Los Angeles County transportation tax.

Area Short Hop," DASH now means a quick, convenient way to make short-distance trips without transferring. Venice DASH, launched in 1987 as a shuttle from Venice Boulevard to the beach, is popular with both local residents and tourists, who praise the service for enabling them to avoid the confusion both of freeways and of local streets.

Venice DASH currently runs on Saturdays, Sundays, and holidays between Memorial Day and Labor Day, every 10 minutes from 11 a.m. to 7 p.m. Community DASH Operations Manager Tom Chang says that the operation will be reviewed after this season, and, if demand warrants, year-round service may be offered.

The City of Los Angeles Department of Transportation has acquired the use of an extensive parking lot at the Marina Business Center, near the Marina Freeway, for Venice DASH. Parking in this lot (well marked with signs and banners and easily accessible from the freeway) costs \$2.50, but the shuttle is free of charge if you board at the lot. The natural gas-powered shuttle proceeds through the Marina to a county parking lot, and to a lot near the Venice Library. To board at either of these other points costs 25 cents. The route to the beach includes a tour through the historic center of Venice to the beach stop a short block from Ocean Front Walk.

Venice DASH is funded by the L.A. County sales tax for transit and from funds generated by the Coastal Transportation Corridor Specific Plan, which requires traffic mitigation from developers. These two sources currently contribute about equally to the shuttle program.

Promotion has been accomplished by means of colorful signs and banners, ads placed in free weekly newspapers, and brochures which are distributed on downtown and commuter buses, in bags at supermarkets, and at hotels, motels, and car rental agencies. Efforts have also been made to include mentions of the service in local traffic reports, and to expand awareness to areas such as Anaheim which are part of the regular southern California tourist route. DASH vehicles also often appear in parades and at other local events. The operators understand that increased awareness leads to more ridership, which can mean increased funding for better service.



Santa Barbara's very popular shuttle.

## San Diego Sun Runner

THE SAN DIEGO SUN RUNNER shuttle system was successful during the 1980s, but was canceled when funds were not made available to repair and operate the buses that had provided the service. The buses were sold at auction.

## Venice DASH

LOS ANGELES HAS SUPPLEMENTED its through-route bus system with the DASH system, which uses 30-foot vehicles in loop routes through 15 different neighborhoods throughout the city. Originally started in downtown Los Angeles as the "Downtown

## Morro Bay Trolley

THE MORRO BAY TROLLEY is now in the second year of a pilot program. It runs daily every half hour during the summer from downtown to the Embarcadero. Bill Boucher, Director of Public Works for the City of Morro Bay, said that the service has accomplished what was intended: traffic congestion has decreased at the waterfront. Funds come mainly from local business. So far, revenues have met operating costs, though not capital expenses.

## Stinson Beach Shuttle

ON A SUNNY WARM WEEKEND, traffic on winding Highway 1 north of the Golden Gate Bridge is sometimes stop-and-go. Golden Gate Transit offers an easier way to

get to Stinson Beach—though many people who have lived in the area for years have not heard of it. Seven buses run Saturdays and Sundays from Marin City, plus three each from Sausalito and the Golden Gate Bridge. In winter the schedule is reduced. The one-way fare from San Francisco, with transfer, is \$3.50. From the Marin stops it's \$2.50. This is not a new service. Years ago it was available seven days a week; the ridership diminished, and the service was cut to weekends and holidays only.

As California's population continues to grow and reach for the beach, shuttle services may prove increasingly attractive in coastal communities. ■

—Hal Hughes

# We all own the coast



*It will be up to California citizens to make sure we can continue to enjoy it, share it with people from around the world and other species, and leave it in good shape.*

There are many opportunities to do important and pleasurable work toward these goals.

- **JOIN ADOPT-A-BEACH.**  
Call the Coastal Commission, 1-800-COAST-4-U.
- **FORM A NONPROFIT ORGANIZATION** with your neighbors and agree to open and manage an OTD in your area.  
Call Joan Cardellino at the Coastal Conservancy, (510) 286-1015.
- **WALK ALONG THE COASTAL TRAIL** and become an advocate for it. Call Coastwalk, 707-829-6689.
- **PARTICIPATE IN PLANNING TRAILS** in your community.
- **SUPPORT PUBLIC AGENCIES** that are charged with managing coastal areas.
- **LEARN MORE WAYS TO ENJOY THE COAST** without damaging it.

*Remember: we want to leave the coast for our children complete with great blufftop trails and beaches, views of the ocean with its sea lions, sea otters, and abundant shorelife; and places to eat, camp, fish, gaze out over artichoke fields, and watch the sunset. ■*

*Tunnel versus bypass: much more than road safety is at stake*

# DEVIL'S SLIDE



*The battle about this stretch of Highway 1 has been raging for more than 30 years.*

HAROLD GILLIAM

**D**RIVE A DOZEN MILES south of San Francisco on State Highway 1 and you'll find yourself confronting a roller coaster roadbed along a sea cliff 800 feet above the roaring surf.

This is Devil's Slide, perhaps the most appropriately named of the 150 California landscape features labeled for the Prince of Darkness. It is the focus of a recurrent political conflict that involves the ambivalent relationship between Californians and the coast.

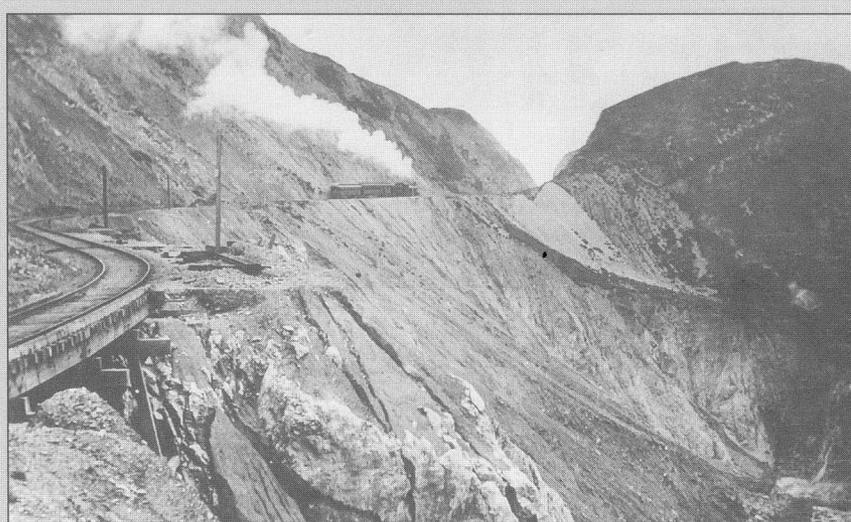
We want to protect what remains of this remarkable natural land- and seascape; we also want to use the coast for transportation and urban expansion. These two purposes are on a collision course at various points along the state's 1,100-mile shoreline—nowhere more so than here on this precipitous oceanfront of San Mateo County.

At Devil's Slide a stretch of road several hundred yards long has been slowly slumping toward the ocean for decades as the unstable land mass is sporadically undermined by the battering waves below. The road has sometimes been closed for several months for repairs, particularly after damage by the storms of 1983 and 1995. It was closed from January 22 through June 29 of this year.

This unreliable two-lane road is one of two principal access routes from the cities around San Francisco Bay to the relatively isolated western side of San Mateo County south of Montara Mountain. That peak is the monumental equivalent of Marin County's Mount Tamalpais and the northernmost summit of the Santa Cruz Range, which divides the county into urban and rural areas.

On the western slopes of the range are deep redwood canyons with streams and waterfalls, wildflower-covered hillsides facing a broad marine terrace (carved by the

Above, storm-damaged Devil's Slide in January 1995.



## A Slippery Name

Originally *Devil's Slide* meant only the promontory and its inland ridge. In the 1880s, travellers in horse-drawn wagons on the Half Moon Bay–Colma Road, which ran along the top of the ocean bluffs, paused to note the chute-like ridge ending in the massive rock dome. They thought it looked fit for a Devil's Slide and named it so.

The Ocean Shore Railroad blasted through the ridge for its roadbed and called the notch the Saddle Cut. The railroad never used the name Devil's Slide for the landslide-prone section of Montara Mountain. It is only in recent times, with the building of Highway One across the unstable bluffs, that the name Devil's Slide has come to mean the ocean face of the mountain.

*From Montara Mountain, by Barbara Vander Werf. Gum Tree Lane Books, El Granada: 1994.*

surf before the range rose to its present height), and a spectacular shoreline of sea cliffs, headlands, coves, and beaches.

Along the northern part of the terrace and adjacent hilly areas are several villages—Montara, Moss Beach, Princeton, El Granada, and Miramar—and the town of Half Moon Bay, all with a total population of about 20,000, adjacent to a metropolitan region of nearly six million. This region has been spared from intensive urbanization by its mountain barrier; the Devil's Slide route and Highway 92, a winding road east of Half Moon Bay, offer the only direct connection with Bay Area cities. This coastal enclave has inevitably been a prime target for developers and subdividers who have envisioned a Coastside population of 100,000, or perhaps twice that number, if the region were to become more accessible.

Along with merchants and property owners who believe they will profit from urbanization, as well as commuters angry at closures of the Devil's Slide route, the developers for decades have called for freeways over the mountains to the Coastside. That goal seemed attainable in the era of federally financed freeway building following World War II. Engineers in the California Division of Highways (now the California Department of Transportation, known as Caltrans), with billions of federal dollars at their disposal, proceeded to fill their drawing boards with a highway engineer's dream, blanket-ing the state map with a spiderweblike network of freeways.

In the San Francisco Bay Area, drivers were to be able to speed to almost any spot on the shoreline—or as much of the shoreline as would be left after the bulldozers and pavers had done their work.



The road was closed for six months this year.



**John Barbour, owner of Moss Beach Distillery:**  
*"I'm for anything that can be done immediately. My information is that the bypass is the only thing that can be done in two-and-a-half years. We don't care if it's a bypass or a tunnel or pontoons over the ocean, we want it done right now."*

Residents of several coastal counties were aghast at what they regarded as freeway overkill, and they eventually succeeded in persuading the state legislature to delete several stretches of the shoreline from the highway plan. Monterey County, for instance, insisted that no freeway would mar the precipitous Big Sur Coast. Marin County also succeeded in forestalling a coastal freeway from the Golden Gate Bridge through Stinson Beach and Bolinas to Point Reyes National Seashore.

San Mateo County similarly rejected plans for a freeway down the county's southern coastline. But the Devil's Slide segment of Highway 1 presented a conundrum. Several hundred Coastsiders commuted to Pacifica, Daly City, and San Francisco over the Devil's Slide route daily. Whenever storm-activated slides closed the road, com-

## The Tunnel Alternative

The proposal for a tunnel bypassing Devil's Slide—in place of the Caltrans mammoth cut-and-fill plan over Montara Mountain—came from the Sierra Club as early as 1973. Caltrans, however, after several studies, has rejected a tunnel as much more expensive than the cost of its own route, which it calculates at \$73 million in 1995 prices.

This year, when landslides from the winter storms closed Devil's Slide, Ted Lempert, president of the San Mateo County Board of Supervisors, assembled an advisory group of six independent engineers and engineering geologists with experience in tunnel construction, including three past or present members of the Army Corps of Engineers and three members of private engineering firms, to explore alternatives to the bypass. The volunteer group inspected the site, studied Caltrans reports, and concluded that "a tunnel bypass appears to provide the most reliable Highway 1 roadway . . . and could well prove less costly to construct."

A two-lane, 4,500-foot tunnel with 11-foot shoulders for emergencies would cost "between 50 million and 70 million

dollars." The tunnel, the engineers said, would eliminate "large cuts and fills in mountainous terrain, already recognized in published geologic reports to be potentially unstable." Among other advantages, they cited elimination of steep road grades and erosion from the massive fills, greater safety in earthquakes, avoidance of the dense fogs that frequent the higher elevations over the mountain, and preservation of McNea State Park.

The San Francisco tunnel-engineering firm of Shank/Balfour Beatty made its own evaluation and came up with a cost of \$60.53 million for a tunnel with a 12-foot emergency lane dividing the two traffic lanes. Separately, tunnel engineer Douglas Slakey of the major engineering corporation of Parsons Brinkerhoff, acting as a private individual, estimated tunnel construction costs of \$50 to \$60 million, and he cited a federal study concluding that tunnels are safer on average than open highways. He mentioned as an example the ten-mile-long single-bore St. Gotthard tunnel in Switzerland—over 11 times longer than the proposed Devil's Slide tunnel.

Caltrans's cost figures for a tunnel are quite different. Last March, District Director Joe Browne updated the earlier

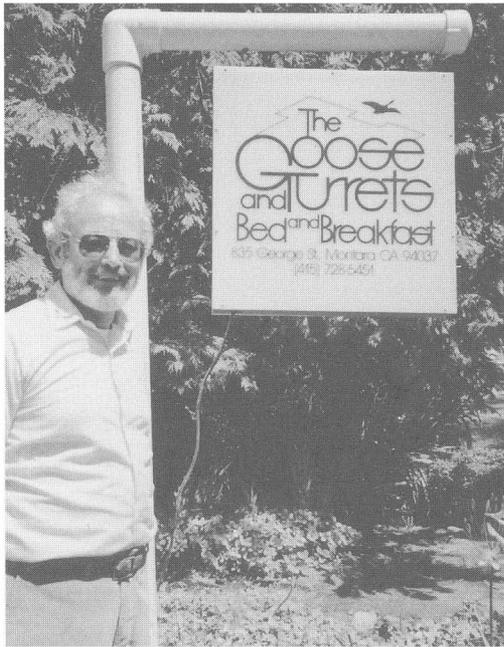
tunnel studies: "Escalated to 1995 costs, the estimate for a single bore is \$89 million and a twin bore is \$136 million including the approach roadways. We believe that due to the length of the tunnel (approximately 4,450 feet long), a single bore tunnel would not provide the necessary level of safety and that a twin bore would be required." A twin bore would accommodate four lanes of traffic.

Browne said a tunnel would also require the added expense of maintenance, including lighting, ventilation, and monitoring, and estimated that cost at \$1 million a year. Engineer M. L. Shank of Shank/Balfour Beatty estimated the maintenance costs at \$600,000 a year, and added that these would be more than offset by savings to motorists, who would be traveling only 1.5 miles through the tunnel (including approaches), compared to 4.5 miles over the bypass with its steep grades and foggy terrain.

To examine and possibly reconcile the differences, Supervisor Lempert and Supervisor Ruben Barrales asked Caltrans to make public all the data on its tunnel studies and requested that Caltrans representatives meet with the independent panel. Browne denied the request and responded that he would

muters and other travelers were forced to use Highway 92, jamming that steep two-lane road with long lines of stop-and-go traffic and incurring an extra hour or more of travel time. On Highway 1, roadside merchants who depended on commuters and visitors were left holding the bag.

As a permanent solution to these problems, the highway engineers, beginning in 1960, proposed to bypass the Devil's Slide area entirely and build a freeway over Montara Mountain. The project would require a massive overhaul of the mountain's landscape, with cuts through the ridges and fills in the canyons, in some cases as high as a 25-story building. The freeway would also bisect McNee State Park, in a bowl of hills between the southern slopes of Montara Mountain and the ocean. (Caltrans spokesman Jeff Weiss makes the point that the park



Raymond Hoche-Mong, owner of The Goose and Turrets, a bed-and-breakfast in Montara:  
 "I don't think we need to destroy Montara Mountain. I have nothing against development, but it has to be tempered development. We don't need a highspeed highway here, destroying the ecological balance of one of the few natural places left in San Mateo County."

not "engage in a new dialogue on the tunnel alternative unless requested to do so by an official action of the full Board of Supervisors." When the board acted later, Lempert and Barrales came out on the short end of a 3-2 vote, leaving the tunnel proposal in limbo.

"The whole thing has become politicized," Lempert says. "I can't see any justification for a public agency to deny information to a public official. When it came to the board in a hearing, our request for information from Caltrans was seen inaccurately as a political

ploy, another delaying tactic. People are frustrated by the delays, and I can understand that, but it's hard to have a rational conversation when everybody is in a battle mode. Our goals were simply to make all the information available and to get the parties together to resolve the dispute quickly."

Thirty-five years since Caltrans first made its bypass proposal, it is not likely to start its bulldozers soon. Still pending is a court decision on the environmentalists' lawsuit. If Caltrans wins, its opponents could still appeal, and Cal-

trans will also need to obtain more permits and buy additional rights-of-way, perhaps by condemnation. These processes could require at least another year or two.

Perhaps June's reopening of the old road will slowly release tensions, diminish the "battle mode," and open the way for reasonable discourse. If not, it seems likely that the Devil's Slide conflict will continue on its merry Mephistophelian way for a long time to come.

—H.G.



As projected by bypass opponents in Pacifica, the tunnel's northern entrance would look like this.



did not exist before the highway was planned. The McNee Ranch was acquired as a state park unit under the voter-approved Coastal Resource Acquisition Bond Act of 1976. Five years earlier, Caltrans had bought a right-of-way through the property. It still owns this right-of-way.)

After two decades of planning and negotiation, the California Coastal Commission in 1985 denied a permit for the highway, pointing out that the law required that Highway 1 in rural areas be a scenic two-lane route. The Caltrans engineers eventually settled for two lanes—plus. They insisted that the steepness of the bypass grade would require turnouts for slow traffic. But instead of occasional turnouts, they provided for climbing and recovery lanes over the steep grades, largely for trucks—two lanes uphill in both directions, one lane downhill, making the road

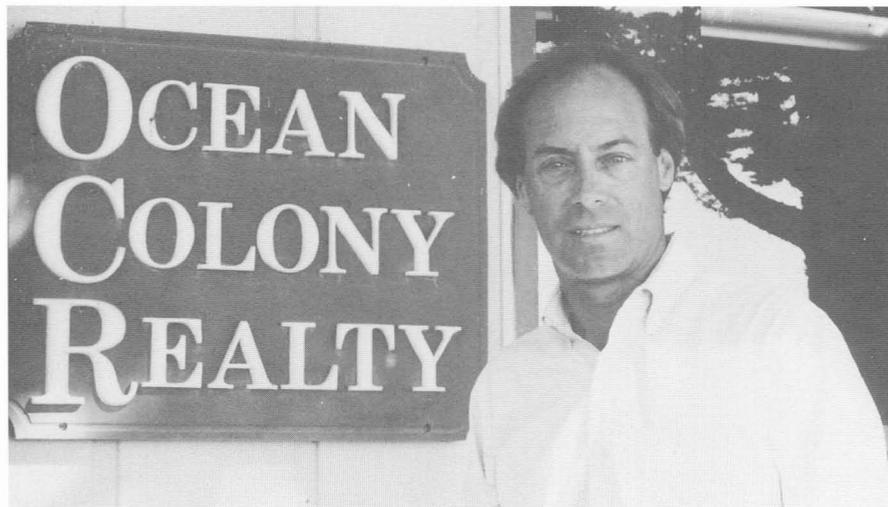
three lanes over the mountain with a quarter-mile four-lane stretch over the summit as an extra margin of safety.

Most of the roadbed over the mountain would still be as wide as had been planned for a full-scale freeway, with room for eventual expansion to six or seven 12-foot-wide lanes, although the bridges could not go beyond four lanes. To the vehement objections of some coastal residents and the cheers of others, in 1986 the Coastal Commission, overriding the recommendations of its staff, voted 7-5 to grant the permit.

After the bypass proposal was first announced in the 1960s, it had been protested by a group of county residents led by Olive Mayer of the Sierra Club, Lennie Roberts of the Committee for Green Foothills, and Nancy Maule of the Committee for the Permanent Repair of Highway 1. They were dismayed by what they regarded as potential landscape massacre over the mountain as well as the threat of opening up the rural Coastside to urbanization.

With engineering advice, they proposed instead the permanent repair of the Devil's Slide route by cutting away the upper part of the slide to bedrock. The removed rubble would be poured over the sea cliff and confined at the bottom by a stone wall—an "engineered fill." This was the so-called Marine Disposal Alternative, or MDA. But Caltrans rejected the MDA, maintaining that it would not stop the sliding. The plan was finally blocked last year by the creation of the Monterey Bay National Marine Sanctuary, which extends from Big Sur to San

**Michael Martin, president of Ocean Colony Realty, Half Moon Bay: "The bypass offers a true solution to our transportation problem. For the tunnel people this is not about transportation, it's about no growth. The tunnel is a skill—it's just a way for the Sierra Club lawyers to make money."**





Mateo County and does not allow for any fills in the ocean.

Meanwhile the state engineers' proposed bypass was delayed by a series of lawsuits filed in 1971 by the Sierra Club, the Committee for Green Foothills, and local residents demanding a full environmental impact statement (EIS). When the report was finished in 1986, the Sierra Club and its allies sued again, claiming that the proposed bypass would turn the state park into highway landscaping, and that feasible alternatives existed. The U.S. District Court ruled that the highway's noise impact on the park was inadequately described in the EIS. But the court agreed with Caltrans that special protection for parklands under federal law was not applicable because the highway and park were "jointly planned." Appeals and litigation continue.

In early 1995, with the Devil's Slide controversy well into its fourth decade and no resolution in sight, the environmentalists tried another approach. They proposed a tunnel through the ridge, thus avoiding the steep grades and the intermittently fogbound zone over the summit. Caltrans had earlier considered a tunnel but had rejected the idea as too costly. The Caltrans tunnel had specified two bores with two lanes in each bore; the environmentalists proposed a single bore with two lanes. The single-bore proposal was endorsed by a panel of independent engineers and geologists (see sidebar), and Lennie Roberts of the Committee for Green Foothills hailed the plan as a breakthrough: "If Caltrans could be prevailed upon to solve

it with a tunnel, we would be happy to drop litigation and everything could move forward very quickly."

Her optimism was not shared by Jeff Weiss of Caltrans: "A tunnel would cost at least \$600,000 a year to maintain because of the need to ventilate it and keep it clear of accidents." Besides, he said, there would be no money to build it. Congress had granted \$50 million for a proposed bypass, not for a tunnel. Roberts responded: "It would be no big deal to get Congress to change the money from one project to another, as long as it

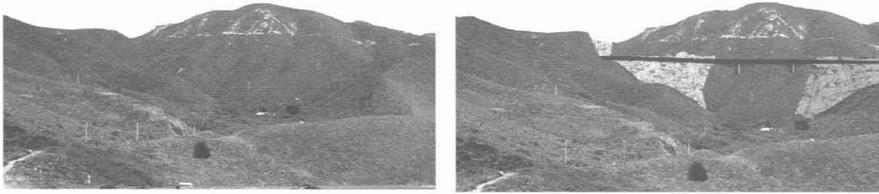
Projecting the proposed bypass onto the northern side of Montara Mountain, opponents point out that it would require a 250-foot-deep V-shaped cut in the saddle, as well as many other massive cuts and fills. The saddle cut would be almost 600 feet wide; that's the length of two football fields.



ANNE WEINBERGER

Pat Seto, owner of Harmony Salon, Half Moon Bay:

"Why cut into the mountain when there are other alternatives? In Europe they build tunnels to preserve the land on top. This is just a neat little place, and that's why people like to come here. It would be ruined by the bypass. I'm a business person, but I don't feel we have to destroy what we love.



These projections by a tunnel advocate give an idea of the impact the bypass would have on Montara Mountain and the state park. Top: Looking east across Green Valley. Everything in view is part of McNee State Park.



Bottom: Looking northeast at the southernmost section of the proposed bypass. Montara State Beach and McNee State Park are to the left. No projections were available from Caltrans.

would accomplish the same purpose." Other backers of the tunnel were less certain about what Congress would do in its present budget-cutting mode.

On the question of purpose there was what appeared to be an irreconcilable controversy. Roberts and the environmentalists have maintained that the purpose is to replace only the present two-lane road, while Caltrans was insisting on three to four lanes over most of the route. A wider highway, in the environmentalists' view, would open up the Coastside to rapid urbanization and destroy its rural character. But backers of the Caltrans bypass, including local commercial interests, claim that urbanization should be controlled by zoning, not by limiting highway access.

"The bypass may put some pressure on growth," says Caltrans spokesman Jeff Weiss, "but we can't do anything about that. Our job is to provide safe and reliable transportation. Growth is up to the local people."

California's experience with rural zoning, however, casts doubt on the proposition that local zoning can control growth. For example, orchards in the Santa Clara Valley were protected in the 1950s by greenbelt zoning, but easy highway access encouraged urban development, confronting orchard owners with skyrocketing property taxes—and fantastic offers from developers. Caught in a vise, they successfully pleaded their case before the authorities, the zoning was removed piece by piece, and the greenbelt orchards were replaced by subdivisions.

It does not require a great stretch of the imagination to picture something similar

occurring on the San Mateo Coastside. In its 1986 environmental impact statement, Caltrans maintained that its proposed route would have no "growth-inducing impact" beyond what was already projected in the local coastal plans certified by the Coastal Commission. However, a growth-impact specialist on the Caltrans staff complained that she had reported the bypass would induce growth far beyond the local coastal plans and that her report had been omitted from the environmental impact statement. Other staff members had also protested that their findings had been changed by headquarters to suit the Caltrans bias for its bypass route.

It is hard to avoid the conclusion that easy highway access to open land in a booming metropolitan area will result in urbanization. Zoning crumbles under the hard impact of economics. Some environmentalists even argue that Caltrans should forget any kind of bypass and simply continue to maintain the existing route with some safety improvements—a strategy that would cost much less than any new highway.

In any case, considerably more thought needs to be given to the proposition that limited access is the price that must be paid to preserve rural space in metropolitan regions.

At a deeper level, the conflict in situations like that of the Devil's Slide is between the dominant American drive for more growth—unlimited urbanization, faster transportation, more intensive commerce—and a growing concern with the quality of life, maintenance of quiet rural enclaves in metropolitan areas, and the preservation of the rapidly diminishing natural scene. In line with the emerging quality-of-life concerns, decision makers would do well to examine meticulously all possible choices, no matter how implausible they may seem from a conventional point of view.

There are no easy solutions, but one thing is certain: Whatever decisions are made now will affect the face of California for generations to come. ■

*Harold Gilliam has written on the environment for the San Francisco Chronicle and other publications since 1961 and is the author of 13 books, including The Marin Headlands, with Anne Gilliam, published by the Golden Gate National Park Association in 1993. He is currently writing a book on the global environment.*



WHOSE RIGHT TO LIFE?

## *The Cat Rescue Movement vs. Wildlife Defenders*

PAT ROBERTO

*Feral cat colonies have become established in parks and other wildlife habitat areas with the help of advocates dedicated to saving them from "death row." But to wildlife defenders these cats are unnatural predators, destroying vast numbers of birds and other small creatures.*

**W**HEN SHE LIVED IN FORESTVILLE, a small town in Sonoma County, Marilyn Davis was known as a friend to cats. She took in strays at the house she and her husband had built by a creek and in time there were twelve. The Davises and the cats lived happily enough until Marilyn saw a troubling pattern: rabbits, quail, varied thrushes,

even snakes and frogs were being dragged over her threshold from the creekside. Because she was also a friend of wildlife, Davis reluctantly confined the most active hunters indoors, but the other cats only seemed to take up the slack. More and more wildlife arrived DOA on her doorstep. More and more cats were brought inside for good until only a few old fat ones were left lolling around on the deck. Whatever flew over their heads, though, they swatted and swallowed, almost in one motion. Finally she faced the truth: "This is their nature, every one of them. They're hunters."

In 1987 the Davises moved to a new house in Bodega Harbour, a residential community next to the salt marsh at Doran County Park. She knew that the marsh was important to wildlife and was therefore alarmed by the sight of many free-roaming cats. A neighbor, a member of Forgotten Felines, had established a feeding station for them at the 16th



**Top left:** Radio-collared feral cat being released at Bodega Marine Laboratory so that its movements could be studied. Some cats were found to range up to a mile. **Top right:** Remains of mourning dove killed by a cat. **Above:** A dead fox sparrow.



One of many cat feeding stations in the Berkeley Marina. Dinner includes both dry food and moist meat patties.

hole of the community golf course, with the manager's consent. She explained to Davis that all God's creatures deserve an equal chance. Davis, mindful of what she had seen with her own cats, consulted wildlife biologists at Bodega Marine Laboratory. What she learned changed her life, and it may help to save coastal marshes and parks from a deceptively endearing predator.

Davis still loves cats. But now she devotes enormous energy and effort to saving wildlife from their predation. This has pitted her against a movement for cat protection that seeks to change custom and, where necessary, laws so that feral cats might live in the wild.

## WHAT'S A CAT?

Feral cats are a growing subject of controversy around the country. Depending on who is talking, they are (1) domestic animals adapted to living on their own in urban areas or in the wild; (2) introduced, and increasingly common, predators that are decimating bird and small animal populations in parks and wildlife areas; (3) homeless, lost, or abandoned pets that have a right to live on their own and whose effect on other wildlife can be minimized with a little help from their human friends.

About the only point not in contention is that feral cats in California—an estimated 3.5 million in the state, or 35 to 40 percent of the total number of "domestic" cats (*Catus felis*)—have become a highly troubling issue in wildlife management.

Thousands of cats now reside in parks and open spaces in cities and suburbs, especially

along the coast, where most Californians live. They find shelter around and under buildings, on university campuses, on the grounds of hospitals, museums, and shopping centers. They survive in woods and along the edges of marshes and rivers that provide ever-diminishing habitat to wildlife. They roam coastal wildlife sanctuaries, preying on endangered waterbirds.

"Feral cats are everywhere," Diane Allevalo, director of the Marin County Humane Society, told the Environmental Forum meeting in Novato on June 8. "You can't see them because they're nocturnal. But they are behind restaurants, at grocery stores, at dumps, in office complexes, and in our parks. Wherever there's a food source, cats will gather."

In many places, food to sustain entire cat "colonies" is provided by cat welfare groups. During the past few years such groups have become so widespread that they constitute a popular movement. They are dedicated to the support of feral cats as an alternative to euthanasia, and are waging an advocacy campaign that is forcing understaffed and underfunded public agencies to face unpopular choices and irate partisans.

Biologist Victor Chow of the Bodega Marine Laboratory, who has encountered the cat movement in the course of his studies of cat predation, observed that "this movement has a huge network. Environmentalists don't know yet what they're up against."

Like Marilyn Davis in her days as cat lady, cat advocates are motivated by compassion for an animal that has a special place in our society. "I can see homeless people on the street and I don't bat an eye," Donna Best of



Evelyn Schlichtung offers milk to a cat that has been waiting for her at one of the three locations she regularly visits. She not only feeds the cats, she can call each by name.



Forgotten Felines in Sonoma County told this reporter. "But the plight of the feral cat is pitiful."

United by a commitment to saving feline lives, cat rescue groups, locally based and only loosely organized, consist almost entirely of dedicated volunteers. They are highly motivated and politically active. Some of their tactics are familiar from other popular movements—civil rights, anti-abortion, gay rights, property rights, environmental justice. They communicate on the Internet, work to shape government policy, do not hesitate to take direct action when they see it as morally necessary, and have gone to court in defense of their cause.

In Virginia last year, Alley Cat Allies, a national feral cat protection group, sought a U.S. district court injunction to stop the National Park Service from removing free-roaming cats from the Riverside Park area of the George Washington Memorial Parkway, near Mount Vernon. They argued that trapping and removal "will mean the likely death of these cats and will cause much hardship and distress to the Plaintiff," who enjoyed visiting the cats. The Park Service, however, removed 28 cats and 2 kittens from the park before the matter was heard, and the case was dismissed as moot.

Taking the legislative route in Santa Cruz County and the city of Las Vegas, cat groups campaigned alongside wildlife and humane societies for spay-and-neutering laws, then negotiated exemptions for themselves to provisions that define anyone who feeds a cat as its owner. Thus they could feed feral cats without being held responsible for them.

At a national conference in Washington last year, Laura Nelson, attorney for Alley Cat Allies, suggested to cat care groups that they "start making a county-wide, or a community-wide, or a state-wide effort to get legislation in place, without telling anyone particularly what you're doing . . . Once there is a law on the books that says 'I am allowed to do that,' that's when you can come public."

## A CAT WELFARE PROGRAM

It is in its promotion of feral cat management programs, however—programs that wildlife biologists and the Humane Society of the United States (HSUS) view as both unrealistic and harmful—that the cat rescue movement has generated the most controversy. Its

programs often use an approach called TTVAR (for Trap, Test, Vaccinate, Alter, and Release), which was developed in Europe, particularly Great Britain, for several interconnected reasons, including public health and cat population control.

Many cat groups in the United States work to persuade public and private land managers to adopt TTVAR when complaints about feral cats reach a point where action is about to be taken to reduce their population. They step up, describe the program, and offer to help carry it out. This means that they agree to trap all feral cats at a particular



DAN ROBBIN AND WENDY OSER

location and have them tested by veterinarians. Diseased cats are put down; the rest are vaccinated for rabies, distemper, and feline leukemia and sterilized. If any are found suitable for adoption, the cat care groups try to find them homes. The rest are returned to their turf to be fed daily by one or two volunteer caregivers, at personal expense. TTVAR requires that each cat be recaptured for revaccination.

Advocates of this program contend that releasing cats where they were found is not only a kindness, it is necessary. A band of healthy vaccinated and sterile cats, numbering from 6 to 100, will hold their territory against other cats that might wish to invade. As feral cats live only three to five years, the argument goes, their numbers will soon dwindle. Daily feeding will reduce the inclination to hunt. Hence the cats get to live out

**This cat has been trapped and is on its way to being neutered and vaccinated. After that, unless it's judged to be adoptable, it will be returned to the cemetery where it was caught.**



Margitta Gardner has trapped many cats for the cat groups. Her own cat, at home, wears three loud bells as warning. "That's my solution," she says.

their lives, while predation and disease are minimized.

"Our whole program depends on sterilization," said Best, of Forgotten Felines, who stated that her organization cares for 6,000 feral cats in more than 100 colonies in Sonoma County, some of them on public land, under contract with public agencies and local governments.

To wildlife biologists and other critics, the trap-and-release program is impracticable if not downright fraudulent, a Trojan Horse full of cats being shunted onto public lands.

First, they say, it is almost impossible to trap all feral cats within a given area at once. Indeed, a member of Happy Tails in Sacramento acknowledged to reporter Tracy Bryan of KCRA-TV that not a single cat had been captured in three colonies this cat group managed. Moreover, cats trapped once will tend to avoid a second experience, thus evading booster shots.

Second, feeding does not prevent hunting; in fact, it may increase the cat's advantage over prey and native predators, including the great horned owl, long-tailed weasel, and gray fox.

Third, evidence is lacking that cats will band together to protect territory; indeed, there is much literature and observation to the contrary. "It's common for new cats to show up at feeding stations," said Ron Jurek of the Nongame Bird and Mammal Program, California Department of Fish and Game. The very existence of colonies attracts more

cats as they become dumping grounds for unwanted pets.

Fourth, sterilization—a step universally applauded—does not appreciably reduce the feral cat population. Biologists Victor Chow and Peter Connors of the Bodega Marine Laboratory argued this point to the city of Santa Rosa in attempting to dissuade it from accepting the TTVAR program. There will always be nonsterile cats around, they said; the program really only enhances the survival rate of kittens.

## THE MEANING OF MERCY

Eric Sakach, director of the Nevada, California, Oregon and Washington regional office of the HSUS, sees such programs as "a form of subsidized abandonment." He says they "don't prevent the suffering of cats, they perpetuate it. Virtually every cat that has been trapped, vaccinated, and released will die some sort of really rotten death—under the wheels of cars, at the hands of someone who does not like cats, from disease, infected wounds, in cat fights. When they can no longer make it to a feeding station they end up dying a miserable death . . . We believe that a stray is best helped when it's taken to a shelter to be adopted or humanely euthanized if it is diseased, not approachable, or not suitable for adoption."

Even if TTVAR worked in theory, critics say, the burden and expense placed on caregivers would be too great for all but the most dedicated to bear. Feeders often drive daily to a distant site to feed cats at their own expense. They must know all the cats of their colony to identify newcomers that need to be trapped and removed and to keep track of inoculations. Sustaining a cat colony through years can amount to holding down a half-time job, one caregiver said. Some cat rescuers carry through on the commitment. In Alameda County, Evelyn Schlichtung, who at age 80 has the energy of a teenager, has for years been feeding cats regularly at three locations. She knows them by name, knows their food preferences and their history. They are her friends. But at Sonoma State University, where Forgotten Felines had a TTVAR program, student caregivers disappeared at spring and summer vacations. After a campus visitor was bitten by a feral cat and sued the university, the program was disbanded. Edna Nakamoto, director of human resources at Sonoma State, said the



cat population had actually increased in the year of the program's operation. "I finally had to tell them we weren't running a cat zoo," she said.

TTVAR got better reviews at Stanford University, where 300 cats—some mangy and belligerent—were saved from the pound in 1990 following an uproar within the university community. "We had alumni calling threatening to stop their donations," said the university's facilities director, Herb Fong. Employees formed the Stanford Cat Network, and the university agreed to permit

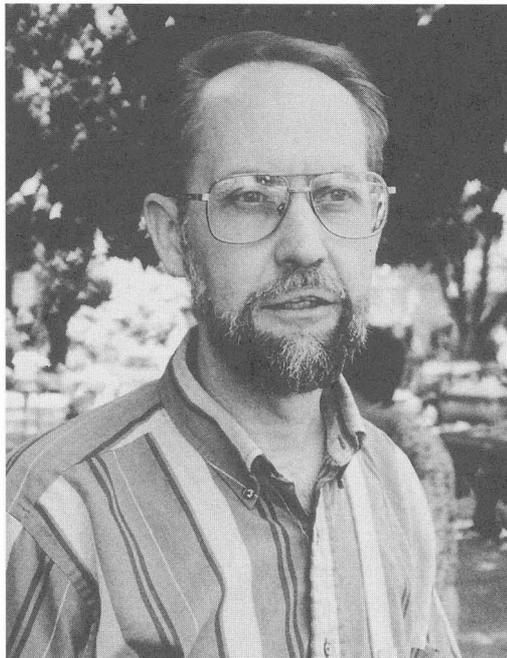
## A Sure Way to Catch A Feral Cat

At Salt Point State Park in Sonoma County, there were some 50 resident cats at one campground a few years ago, according to State Ranger Dan Winkelman. "It was unbelievable. They would almost attack you, they'd scream at your campsite until you'd throw them some food."

Something had to be done. Ranger Winkelman devised an effective strategy for capturing the cats. After a rain, when the sun came out again, he would heat up a tin of cat food and place it in a raccoon trap on a picnic table. The cats would be hungry, for the rain had kept campers away. Winkelman said he "couldn't set the trap fast enough." His only problem was finding a cage big enough to hold the cats until the animal control officer arrived.

"To some people this might seem heartless," the ranger said. "But it's heartless to leave the cats there to multiply and starve."

The problem at this particular campground was solved, for a while at least. But it exists in almost every campground in the State Park system, Winkelman has found in his 15 years with State Parks. "And we will continue to have this problem as long as people keep dropping cats off in parks. They think they have a wild animal who can adapt, but these cats depend on a human food source. In the campgrounds they become moochers, not hunters. They depend on campers and dumpsters, and they multiply over and over until the campground is overrun. When the campers leave they start to starve. It's a very cruel situation."



RASA GUSTAITIS

Wildlife biologist Ron Jurek, at the California Department of Fish and Game, knows that feral cats are a major menace to wildlife.

them to feed the cats and care for them. Fong said the campus cats are now much healthier and friendlier and that complaints about cats are "way down." Their numbers remain at 1990 levels, however, and trapping to remove newcomers is "constant."

The question of whether TTVAR delivers what it promises is further complicated by the refusal of caregiver groups to allow scientific studies. Investigators are routinely told that the locations of colonies and feeding stations must remain secret to prevent people from dumping unwanted cats. This reasoning is hard to rebut, but it serves to insulate the hundreds of feeding projects around the state from public as well as scientific scrutiny.

Conflicts between cat groups and wildlife advocates are so fundamental they extend to the very definition of the animal in question. What exactly *is* a cat? Wildlife biologists say it's a domesticated animal whose survival strategy was to adapt to humans, a pet with no other ecological niche than the sofa or the front porch. Many cat advocates disagree, citing the writing of Roger Tabor, a British biologist and a major theoretician of the movement. In *The Wild Life of the Domestic Cat*, Tabor contends that the cat is, uniquely, both domestic and wild. Like the pigeon, it depends on food made available largely by humans. "The feral domestic cat is certainly part of our wildlife and has been so for a long time, whether we admit it or not," Tabor writes. It is "just filling the place of the declined wildforest cat."



DAN ROBBIN AND WENDY OSER

Checking out the menu



California quail used to be common in Golden Gate Park. Now only one pair is left, says ornithologist Luis Baptista.

## CAT OWNERS' ALERT

At the Animal Rehabilitation Center of the Lindsay Museum in Walnut Creek, a placard at the admissions desk shows a cat pouncing on a chick. "Four to five million birds are killed by cats each day in the U.S." reads the message below. "Please keep your cat indoors during baby bird season. It will save countless wild lives."

Susan Heckley, the center's director, says cats from the suburban environs cause about a third of the 7,000 casualties brought to her facility each year, leaving tell-tale puncture wounds on birds' bodies. These figures do not include prey killed outright. However, 80–90 percent of birds that survive a cat attack die within a few hours, infected by a bacterium, *Pasteurella multocida*, picked up by cat claws and teeth from decaying carrion. A few survive if antibiotics are promptly administered.

Heckley makes no distinction between feral and domestic cats. Either will kill given the opportunity, and both must be controlled. "Fifteen years ago, we saw far fewer birds but many, many more species," she said. "Now most of the species are gone and what we see are your typical urban birds, swallows, and mockingbirds." ■



Ron Jurek at Fish and Game calls this bunkum. "Cats are domestic animals bred for companionship with humans. They fill no niche in the wild except that carved out for them by people. Cats have no place whatsoever in parks." (Like most leading opponents of trap and release programs, Jurek is a cat owner, disproving a cat movement allegation that the issue pits "cat lovers against bird lovers." Four cats live in his home, but do not roam beyond the deck.) Left to their own devices, cats must spread thinly and range widely to eke out a short and miserable existence. Far greater densities quickly become the norm wherever cats are fed in groups. "Even a small group of six cats roaming over a few dozen acres of open space exists at a population density greater than all local native mammal predators combined," Jurek said. The result is an inexorable depletion of ground-nesting birds, small rodents, reptiles, and amphibians including salamanders and frogs.

In coastal areas, from Humboldt County to San Diego, this is precisely what bird watchers and wildlife managers are witnessing wherever appreciable numbers of cats live in the wild.

## PREDATION ALONG THE ENTIRE COAST

The Arcata Marsh and Wildlife Sanctuary is habitat to more than 200 species of wild birds and mammals—and 12 to 15 feral cats. People from around the country and abroad come here to admire this model environmental project, a marsh created during the past two decades with the help of the Coastal Conservancy at the site of a former dump. Now, though, the cats are "threatening the very species we are trying to provide with sanctuary," said environmental resource specialist Julie Neander. The sanctuary's staff and volunteers must stand by helplessly: not only do they have no policy regarding cats, but the city does not even have an animal control officer. The volunteer trapper who used to remove the cats has left the area. Visitors feed them, not realizing the implications for vulnerable wildlife.

Along the entire coast, cats are preying on the endangered light-footed clapper rail and California least tern, on rodents including the endangered Pacific pocket mouse, and probably many other species now so rare that predation patterns are impossible to document. Well-fed and -maintained coter-

ies of cats are blamed in large part for the disappearance of quail from Stanford University campus and from Golden Gate Park. San Francisco's famous park is "essentially an island surrounded by cats," observed Mark Rauzon, chairman of the Pacific Seabird Group, who has been working on feral cat problems on central Pacific islands.

On a recent summer evening a mottled white-and-brown female and her gray calico kitten drank at a dripping water spigot by the M. H. de Young Memorial Museum, vanishing behind a dumpster at the approach of humans. From behind the statue of Giuseppe Verdi on Kennedy Drive, a gray tiger tom stepped out to the evening tune of song sparrows.

Such scenes sadden Luis Baptista of the California Academy of Sciences, one of the world's foremost ornithologists. He has been studying the local dialects of the white-crowned sparrow and other songbirds and presently advises the Mexican government on controlling cat predation against birds on the Socorro Islands.

"When I first came here in the 1960s, the rabbits and the quail could be seen on any lawn. White-crowned sparrows were so thick on Strawberry Hill I had trouble isolating the voice of any one of them with my parabola reflector (microphone). Now the ground birds and rabbits are just about gone. I haven't seen a cottontail for years here, and there is only one pair of quail left, inside the arboretum." Baptista points to the cat feeding stations that become operative at morning and early evening in many parts of the park.

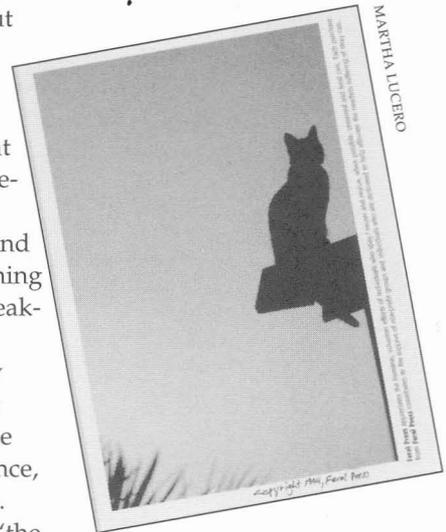
At a hearing on the subject of cats in the park before the San Francisco Commission of Animal Control and Welfare in January 1993, 15 of 18 speakers identified themselves as cat colony managers, and most offered other explanations for the disappearance of birds

and small animals: other predators, parasites and infections, removal of underbrush, drought, and automobiles.

Baptista accepts none of these theories. The few predators in the park other than cats are far less efficient hunters. Furthermore, cats leave evidence: wings and legs, which raccoons and possums would consume. The nesting habitat in the park is still there, but the birds are gone.

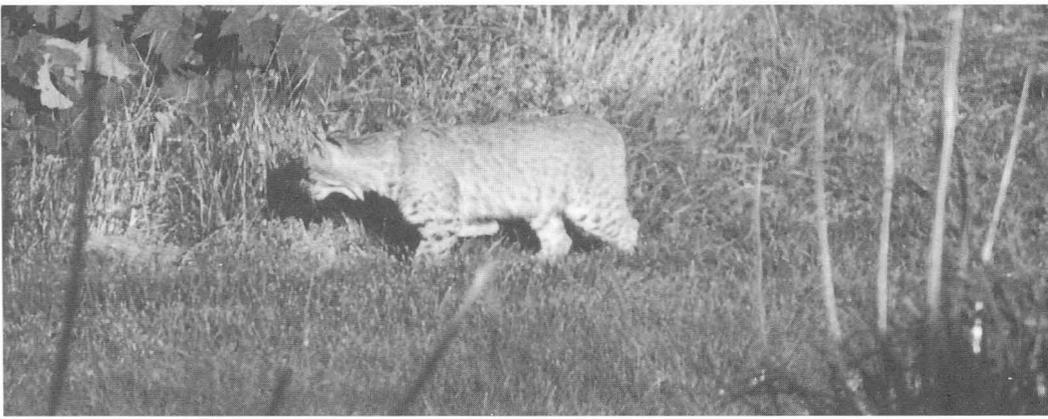
Meanwhile, in Morro Bay, Judy Sullivan, a writer and bird watcher, held her peace for years watching good-hearted cat feeders at Morro Rock State Ecological Preserve, where nesting birds include the white-crowned sparrow, snowy plover, and endangered peregrine falcon. Every morning an elderly couple served a sumptuous breakfast of fish, roast turkey, and gourmet cat food to some 45 cats. Evenings, an elderly man brought a simpler supper. Then, last spring, Sullivan and a friend spotted some white-crowned sparrows that, at first glance, they took to be mutants: they had no tails. Looking more closely, they realized that "the feathers had been mauled by cats." Shortly thereafter, the sole peregrine falcon fledging seen that spring vanished from its nest in a rock crevice. Sullivan knew she had to take action.

She persuaded the three feeders that neither birds nor cats were well served by cohabitation on the Rock. Together, Sullivan, her young son, and one of the feeders borrowed traps from the local cat welfare group, Homeless Animal Rescue Team (HART). (In 1994 HART had received a \$2,500 grant from the city to catch and sterilize cats, with permission to return them to the Rock. State park officials have since prevailed on the Morro Bay City Council to rescind that permission.) With these traps Sullivan and her allies captured 45 cats within a year. HART could take only 20. So Sullivan found adop-



MARTHA LUCERO

Martha Lucero, who has fed feral cats at the Oakland Airport for seven years, dedicates part of the proceeds of her "Feral Press" cards to the cause.



Marilyn Davis sent this photo of a bobcat with a note: "This was taken in my front yard at Bodega Harbour. This is the kind of cat I am worried about saving."

tive homes for 12, and took the remaining 13 to the local animal shelter. Two cats eluded capture but were later shot by unknown vigilantes. While the trapping was under way, state park staff posted a sign warning against abandoning or feeding cats at Morro Rock. City police caught a HART leader attempting to scratch out the "no feeding" message.

Similar conflicts are occurring along the entire coast. On the Famosa Slough in San Diego, active nests of the endangered light-footed clapper rail have been observed during the past two springs, but not fledglings. "They always get eaten," said Jim Peugh, president of the San Diego County Audubon Society. Because endangered species were being threatened by predators, the Animal Damage Control unit (ADC) of the U.S. Department of Agriculture set out traps. On each of five nights of trapping, some traps were stolen, disturbed, or destroyed, according to Susan Wynn, a biologist with the U.S. Fish and Wildlife Service, which funded the roundup. ADC nevertheless removed seven skunks, two possums, and 16 cats to the Humane Society. Peugh subsequently saw a few black-necked stilt fledglings. Now a nearby resident has begun to feed cats on the slough channel and will not be dissuaded.

## PUBLIC HEALTH CONCERNS

As cat colonies proliferate, there is concern that they might become disease transmission sites. The Centers for Disease Control and Prevention has warned that free-roaming cats can pick up fleas infected with plagues from rodents and ferry these fleas to humans. In the December 1994 issue of *Infectious Disease Alert*, a newsletter published by American Health Consultants, Dr. Stan Deresinski listed 21 cat-associated infections of humans. Cats can transmit parasites, such as roundworm, as well as toxoplasmosis, a severe infection of the blood that is especially hazardous to children, AIDS patients, and pregnant women.

There is also concern that wild species may be infected with domestic cat diseases. Raccoons, foxes, possums, and other wild animals are attracted to food bowls. In 1993 a mountain lion that staggered onto the Sacramento State College Campus and died was found to have feline leukemia—the first recorded case in cougars in North America.

Despite these concerns, Alley Cat Allies,

Forgotten Felines in Sonoma County, and Happy Tails in Sacramento all argue that destruction of habitat, other predators, and herbicides take a far higher toll on wildlife than cats do.

Nobody disputes the fact that the decline in bird populations has many causes, especially habitat destruction and toxins in the environment. As habitat shrinks, however, and the human population grows—along with the populations of pets—the impact of cats gains in significance. The ratio of cats to humans in this country is conservatively estimated at 1 to 3.

In their proud exhibition of captured prey, cats are often their own worst enemies. A study of house cats in a village in England by Peter Churcher and John Lawton, who counted such displayed trophies for one year, concluded that cats kill about 70 million animals annually in England. In a similar but smaller study at the University of Richmond, ecologists Joseph Mitchell and Ruth Beck estimated that Virginia's one million cats kill three million birds a year. At the Bodega Marine Laboratory, Peter Connors estimated that half a million birds are lost to cats annually in Sonoma County alone.

Studies notwithstanding, the need to find a political solution acceptable to armies of cat lovers has often made the cat movement's agenda palatable to state and local officials. In Sonoma County, Forgotten Felines won contracts to maintain colonies at Bodega Dunes Campground at Sonoma Coast State Beach, Spring Lake County Park, and several municipal parks in Santa Rosa and Sebastopol.

## HARD TO RESIST

Robert LaBelle, the Russian River/Mendocino District Superintendent for the California Department of Parks and Recreation, read the literature from Forgotten Felines and decided to try their approach. Although state regulations prohibit keeping nonnative species in parks, LaBelle believed that having the cats altered, vaccinated, and fed by willing volunteers was better than doing nothing. With feral pigs, poachers, and increasing violent crime to contend with, LaBelle said, cats were simply not a high priority. So he sent Forgotten Felines a signed agreement.

Then a fat manila envelope from Marilyn Davis landed on his desk, with research





papers and published criticism of trap-and-release programs. A letter followed. "I suggest you send another letter to Forgotten Felines, which begins, 'On second thought . . .,'" Davis wrote. And LaBelle did.

The work of Davis and her small band of allies was crucial to the passage of an ordinance in Sonoma County last May that requires alteration of all free-roaming cats, prohibits feeding on county lands, and makes animal abandonment a misdemeanor. However, Forgotten Felines won an 18-month extension on some feeding programs while they look for homes for the cats.

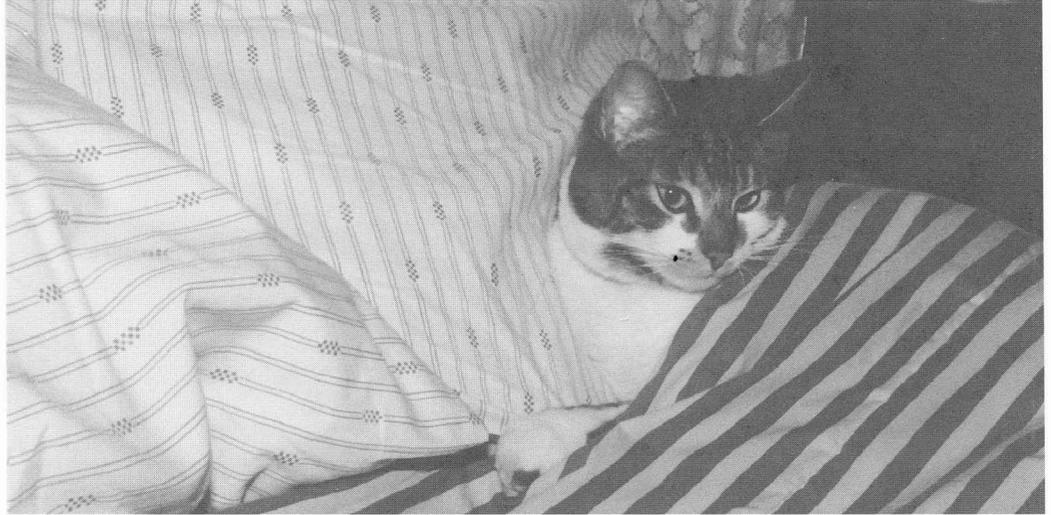
In March 1995 Davis founded the Native Species Network to alert the public about the harm introduced predators do to wildlife. She has tirelessly studied the activities and tactics of the cat movement and has mastered much of the scientific data available to refute their claims. A small, intense woman with delicate features, sparkling blue eyes, and a bold profusion of white hair, she has a passion for preserving parklands for wildlife that equals the care groups' passion for cats. She tries to bring her case for the right of wildlife to live in a cat-free environment to every jurisdiction, public or private, where cat groups are managing colonies with official approval. Tirelessly, Davis delivers

the evidence that cats will hunt and kill wild species. She attends community meetings and writes to park directors. She urges officials to make the politically difficult choice to remove cats from public areas, delicately adding some points about their legal liability for hosting a cabal of unpredictable, antisocial clawed animals.

If Sonoma County is any example, the Native Species Network and other wildlife advocates have their work cut out for them, not only in fighting cat colonies, but also in convincing the ambivalent—including park staff, who should be on their side. But rangers at understaffed parks often welcome cat rescuers because, as activist Donna Best said, "They don't have the resources; they don't have the manpower; they don't have the will" to deal with the problem.

Dan Knapp, director of the Sonoma County Humane Society, says his staff are demoralized by the sheer numbers of throw-away domestic pets they must kill. Sympathy for cats translates into the sabotage of traps and a lack of commitment to trapping programs. Unless another approach is tried, said Knapp, himself a cat movement activist who lectured on political tactics at the 1994 conference in Washington, feral cats will continue to exist and their populations will

**Marilyn Davis and her husband stroll in the dunes near home. She works to protect such natural areas from cat predation.**



Companion cat in a proper niche

expand. "Then you get a group which has tremendous resources and tremendous commitment to this (TTVAR) program, and you think, well, let them try." His position is at odds with that of the 2.5-million-member HSUS, which has taken a firm stand against the trap-and-release programs. Local humane societies are autonomous.

### IS THERE A KIND SOLUTION?

The single-mindedness, energy, and determination of the cat groups is both admirable and disquieting to those who have encountered them. "If only we could redirect the wonderful energy of these sincere and good-hearted people," said Luis Baptista.

What, then, can be done?

In the long run, the answer will lie with public education. People tend to love what they know. Most people know cats and dogs and have little knowledge of wildlife. In today's fragmented society, many people look to pets for the contact and affection that children and family members used to provide. Daniel Evans, executive director of the Point Reyes Bird Observatory, thinks that many people project a human value onto cats, developing an emotional attachment that clouds their view of the larger picture. More good studies on cat predations are needed, especially in California, he said, but funding is hard to obtain for such potentially unpopular research.

Cat owners, individually, can make a big difference by keeping their pets indoors. "We urge that shelters make that part of their educational message," said Samantha Mullen of HSUS, in Washington. "Some shelters will not allow cats to be adopted

unless there is agreement they will be kept within the owner's home. That's the trend now." Those who understand the problem can educate their neighbors and friends. "Sometimes the best we can provide for [stray or feral] cats is an easy death," said Erik Sakach of the HSUS.

Communities need to adopt regulatory measures to require cat owners to assume responsibility for their pets. Toward that end, the city of Novato, in Marin County, now requires that cats be licensed and implanted with an identifying microchip.

Cities, counties and park authorities need to adopt feral animal policies; feral animal removal must become a permanent, regular feature of wildlife management, wildlife biologists agree.

Communities can set heavy fines for failure to spay or neuter cats, abandonment of domestic animals, and feeding in public places. The Sonoma County ordinance adopted in 1994 does all three.

Current laws that prohibit feeding animals in parks need to be enforced. This would thin out colonies and undercut the cats' advantage, biologists Chow and Jurek say.

In the end, the choice seems to be between two unpalatable alternatives: sacrificing wildlife to cats, or euthanizing unowned and unclaimed cats.

It's a tough choice, says Daniel Evans, at the Point Reyes Bird Observatory, but "the main problem is that we are losing wildlife, and cats are a major cause. People have to decide if they want to go to the park to see wildlife or to see cats." ■

*Pat Roberto is a free-lance writer who lives in Berkeley.*



**Ocean Park Way Gazing**

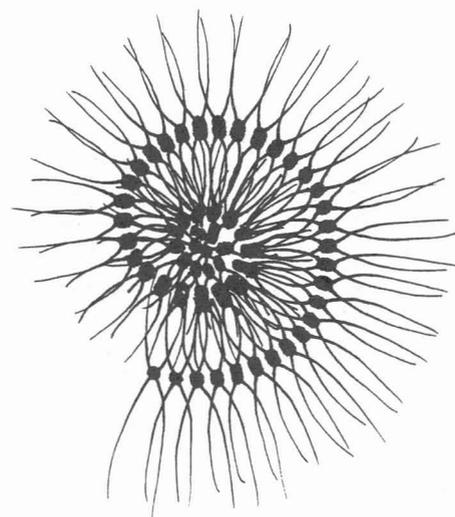
Ocean up  
against cliff  
    Long thin roll  
of surf  
over  
the longest shale reef on the North Coast  
& way out tiny point is buoy  
    is light at night  
signaling danger  
    But this morning is peaceful  
        Just slight  
movement of breeze cool caress  
    like a nursery song.  
Flat glimmering gliding surface  
    Past Echium's purple plumes in hues  
spotted with bees  
Catching a morning breakfast.

The Coast Range rise light  
    mossy green and in its fold  
dark design  
    of fir, redwood and pine.  
Monarchs 'empower' this scene  
    when they land  
Lightly in their cruise  
    for nectar. Poison oak  
just a yard away.

The voice describes the scene  
    looks up for reference  
    listens to two  
    song sparrows carry out  
their call

And response as the hissy light  
    waves roll over changing continuum  
The minutes go by the sea  
    The sea closes in  
Up to the edge of mythology.

March 17, 1992



DARRELL DEVORE

||

Muso Soseki  
companion on the bench  
beside me  
restless surface watching,  
the minutes, endless  
silver inlets  
down the coast

8:28AM March 24, '92

*Muso Soseki was a Zen Buddhist  
poet in the ninth century.*

# HIDROVIA: Controversial Water Highway Plan Threatens World's Largest Intact Wetlands

GLENN SWITKES

**T**HROUGHOUT HISTORY, the world's rivers have served as natural arteries for commerce, affording convenient routes for regional trade. Rivers have also meant life to a rich diversity of fish, birds, and wildlife, as well as to diverse human cultures along the river shores and in wetlands nourished by the fluvial system.

Today, in many parts of the world, the artificial modification of river systems is being promoted as a key to increasing the flow of goods, principally raw materials, from developing to industrialized countries.

Despite lessons learned the hard way in the United States and Europe, where rivers and wetlands that have been artificially altered for commerce are now being recuperated, international aid agencies continue to support these large-scale engineering projects as a key to regional development.

The creation of Mercosur, South America's new Southern Cone common market, has led to a proposal to sacrifice the Paraguay River and convert it into an "Hidrovia" (Water Highway), an industrial shipping channel linking Argentina, Uruguay, Paraguay, Brazil, and Bolivia. Politicians and businessmen speak of the Hidrovia as the "backbone of South American integration."

The plan to obstruct and divert the Paraguay and detonate rock formations

along the river is designed to allow oceangoing ships and barge trains entering the La Plata estuary near Nueva Palmira, Uruguay, to sail up the Paraná and Paraguay Rivers all the way to Cáceres, Brazil, a distance of more than 2,100 miles. Project proponents estimate that the engineering works will cost \$1.3 billion, but it is likely that the channel will need perpetual dredging and maintenance, requiring the investment of another \$3 billion over the project's initial 25 years.

Critics of the project say that its sole beneficiaries will be construction conglomerates, agribusiness giants including the world's largest soy exporters, and shipping magnates; that the Hidrovia will destroy the world's largest intact wetlands, the Mato Grosso Pantanal; and that it will cause massive social dislocation.

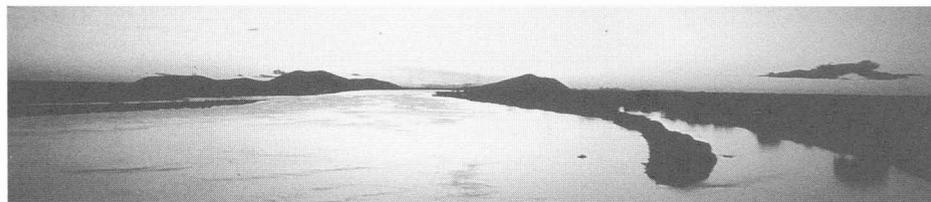
The Pantanal is without a doubt one of the most complex ecosystems on earth. Located at the convergence of the Amazon rain forest, the *cerrados* or savannas, the Chaco wetlands, and

areas of subtropical deciduous forest, it is a wetland expanse larger than northern California. It serves as a filter for sediments and pollutants and supports an immense concentration of wildlife—more than 600 species of birds, including the jabiru stork and the endangered hyacinth macaw; 80 mammal species, including jaguars, the giant river otter, giant anteater, marsh deer, and maned wolf; more than 1,100 types of butterflies, 400 fish species, and 50 reptile species, including caimans, the unique caiman-lizard, and the planet's largest snake, the anaconda.

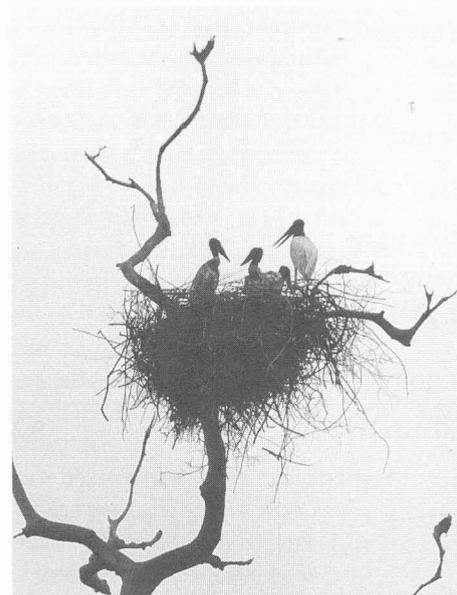
Serving as a gigantic sponge, the Pantanal absorbs torrential rains and gradually releases water during the dry season. Scientists consider rock formations at the base of the Pantanal as the "cork" that controls the flux of the Pantanal's waters. These rocks would be dynamited to open a deeper passage for oceangoing ships inland on the Paraguay. This might not only drain the Pantanal over time, but could also worsen seasonal flooding in the lower portion of the watershed.

Even more audacious river modifications have been proposed, including a "multiuse plan" by the Paraguayan government to build a dam at Bahia Negra that would generate electricity, pipe water out for irrigation, and pump water back into the Pantanal to mitigate the negative impacts of the Hidrovia.

Some have compared the engineering works planned for the Paraguay with those carried out over the last century on the Mississippi and the Rhine. As residents of the Mississippi Valley bailed water out of their living rooms following the second so-called hundred-year flood within the past three years, many hydrologists became convinced that areas of the river that have traditionally been vulnerable to flooding were doomed, rather than saved, by channeling, cutting of meanders, and construction of dikes. Plans have now been



GLENN SWITKES



GLENN SWITKES

Top: sunrise on the Paraguay River. Above: Jabiru storks, the largest birds in the Pantanal

presented for restoration of wetlands along the Mississippi floodplain as a cost-effective, permanent technique of flood control.

A similar review of traditional river engineering practices has taken place in Europe, where the Rhine, once a complex fluvial system laced with tributaries large and small, has been reduced to little more than a man-made canal. There, too, catastrophic flooding has led to regional plans for wetlands restoration.

In May, the United Nations Development Programme (UNDP) began environmental impact studies for the Hidrovia, which are expected to take 18 months to complete. The objectivity of the studies has been called into question by the failure of the UNDP to adhere to its own policies. There has been no consultation with environmental groups and scientists, nor with populations that would be affected by the Hidrovia, and key details of the project have been withheld from the public.

In December, more than 70 representatives from environmental, human rights, academic, and indigenous groups in the five South American countries that are part of the Hidrovia project, along with their supporters from the United States and Europe, met in São Paulo to discuss strategies for confronting the juggernaut of the Hidrovia. A detailed proposal for public participation calling for consultation, public meetings, and information centers was drawn up and presented to UNDP and the Inter-American Development Bank, which is funding the studies. Despite all that effort, the environmental impact



studies that could decide the fate of the Pantanal began without public input mechanisms in place.

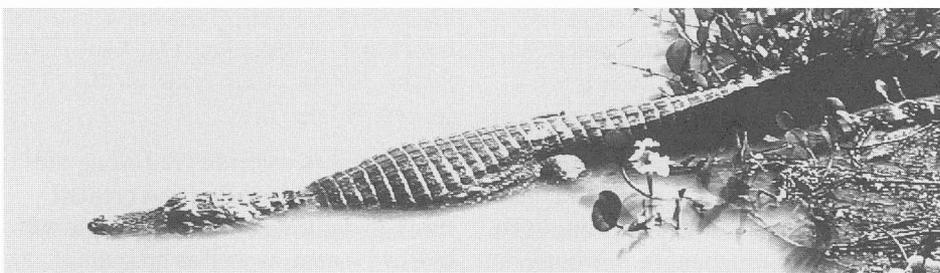
For generations, the Pantanal has provided a sustainable livelihood for indigenous people, fisher folk, hunters, and gatherers of wetlands plants. More recently it has also demonstrated a capacity to support cattle ranching and ecotourism, although the sustainability of these activities is a matter of debate. Construction of the Hidrovia will damage or destroy such sustainable uses and provide broad incentives for exploitation of this great natural resource by mining, large-scale cultivation of soy and other monocultures for export, and increased logging. Each of these uses will leave environmental scars on the Pantanal and *cerrado*.

Objections to the project have been made on economic as well as ecological

grounds. An analysis carried out by CEBRAC (Brazilian Foundation Center for Reference and Cultural Support) for the World-Wide Fund for Nature found that the cost-benefit analysis used to justify Brazil's investment in the Hidrovia ignored alternative transportation routes, including existing river transportation networks, the East-West railroad currently being built with private capital, and a host of plans for road construction and improvements.

Eventually the governments and citizens of the region will have to make difficult decisions about balancing short-term economic gains against the long-term value of natural ecosystems. The debate over the Hidrovia provides an important opportunity for local activists to present new proposals for economic development. "The Pantanal area is unique in the world," says Sergio Guimarães, director of the Life Center Institute (Instituto centro de vida), in Cuiabá, Mato Grosso. "It has a great economic potential, as an area for ecotourism or more intensive raising of fish. Much smaller investments in the right activities could provide even greater economic benefits than the Hidrovia." ■

*Glenn Switkes is director of the Latin America Program of International Rivers Network. He is a journalist and filmmaker, specializing in environment and development issues. For more information: IRN, 1847 Berkeley Way, Berkeley, CA 94703, (510) 848-1155 or irn@igc.apc.org*



Caiman

GLENN SWITKES

## IN BRIEF

**T**HREE NEW GUIDEBOOKS illuminate the difficulties of describing California's abundance of opportunities for outdoor recreation.

*California State Parks: A Complete Recreation Guide*, by Rhonda & George Ostertag. The Mountaineers Books, Seattle WA: 1995, \$16.95 (paper), 384 pp.

A handsome standardized format combined with thorough information provides a useful guide to California's astonishingly diverse state park system. Access, facilities, recreational opportunities, scheduled activities, and natural history are all readily at hand in this volume. One only wishes for more and better maps.

*100 Hikes in California's Coastal Sierra & Coast Range*, by Vicky Spring. The Mountaineers Books, Seattle WA: 1995, \$12.95 (paper), 256 pp.

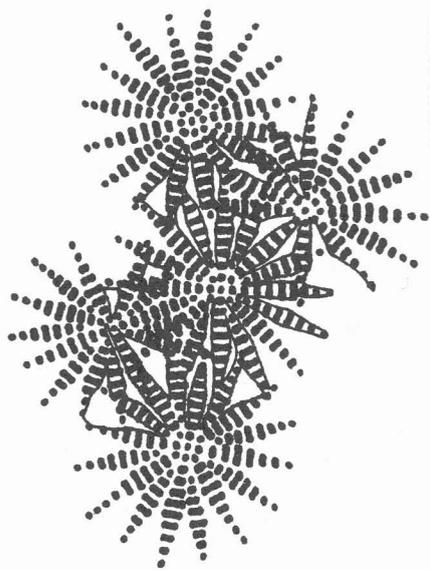
Thorough descriptions of each hike, including alternative routes, presented in a concise format, make this a practical guide for hikers at all levels. The information is presented from an experienced hiker's angle, pointing out both the beauties and perils along the way. Fine photographs and drawings of routes enhance the text, though (as the author stresses) it must be complemented by the use of good maps.

*Adventuring in the San Francisco Bay Area*, by Peggy Wayburn. Sierra Club Books, San Francisco CA: revised edition, 1995, \$15.00 (paper), 452 pp.

A guide to predominantly outdoor activities in the nine Bay Area counties, with profiles of national, state, and local parks, lists of recreational opportunities, travel tips, and much more, this book seems to be overly ambitious in scope.

Though many historical and descriptive passages are quite expansive, much of the book is cursory. For example, "Historic San Francisco Walks" elaborately details three walks on Geary Street and four in the Golden Gate National Recreational Area but virtually nothing else. Likewise, several pages describe the pleasures of hot air ballooning in Napa County, but offer little else about the county beyond brief mentions of a few wineries and parks (though there is a rather extensive history of California viticulture). Maps are sparse and scattered. There is a lot of good material here, but inconsistency and disorganization limit the book's usefulness as a guide to the area. It is certainly not "complete and comprehensive" as the jacket copy claims.

—Hal Hughes



DARRELL DEVORE

*The Coastside Trail Guidebook*, by Barbara VanderWerf. Gum Tree Lane Books, El Granada, CA 94018; \$10.95 (paper) 112 pp.

The six-mile Coastside Trail along the shore of Half Moon Bay was created through dedicated effort by people who live in the area, as well as by public agencies including the State Coastal

Conservancy. That the author of this guide has intimate knowledge of this stretch of shoreline and its history is clear if you only leaf through its pages. If you take the book along on one of the nine walks she describes, you can expand your hiking experience into new dimensions. Learning about plants, birds, and puzzling landscape features along the way. —R.G.

*California Water 2020: A Sustainable Vision*, by Peter H. Gleick, Penn Loh, Santos V. Gomez, and Jason Morrison. Pacific Institute, Oakland, CA: May 1995, \$15.00, 114 pp.

This report is the product of a year-long research project that examined long-term water planning in California and shaped a vision of sustainable future. Its authors have concluded that urban and agricultural water use can be far more efficient than they are today; the state's natural environment can be substantially revived and protected; and the goal of sustainable water use can be attained, all by the year 2020. Attaining these goals is possible within current policies and with the use of currently available technologies. Detailed recommendations for the necessary changes are offered. Prepared by the Pacific Institute for Studies in Development, Environment, and Security, *California Water 2020* is attractively designed and illustrated with tables, diagrams, and photographs. It should be valuable to policy-makers, water managers, and anyone with an interest in California's long-term future.

The report can be obtained from the Pacific Institute, 1204 Preservation Park Way, Oakland, CA 94612, (510) 254-1600, fax (510) 251-2203, for \$15 to cover printing, postage, and handling.

and with partial funding from the Coastal Conservancy, has opened a temporary interpretive center in the north parking lot of the Bolsa Chica Ecological Reserve in Orange County. The center is focused on wetlands and migratory birds. Exhibits include a model nesting island for least terns, a model mudflat, and interpretive panels. Eventually, this modular building may be replaced by a permanent center on the south mesa in the Harriett Wieder Regional Park, adjacent to the reserve.

### HUMBOLDT BEACH AND DUNES PLAN IS ACTIVATED

Humboldt County has begun to implement a comprehensive management plan for the entire 26-mile-long Humboldt Beach and Dunes system with the help of \$250,000 in Conservancy funding approved in March.

The plan provides a comprehensive management framework for 3,460 acres of dune and wetland habitat extending from the mouth of the Mad River south to Table Bluff County Park. It attempts to resolve the growing conflicts between recreational use of the dunes, especially by off-highway vehicles (OHVs), and to enhance resource protection and restoration, and identifies opportunities to further both these goals. The recent purchase of 160 acres of dunes by an OHV club has enormously complicated the plan's implementation (see p. 14).

John Woolley, chair of the Manila Community Services District Board of Directors, noted that the Conservancy's financial and technical assistance during the past several years has already bought many economic and social, as well as environmental, benefits to the community. Funds were provided to develop public access and restore dunes in Manila, and to acquire a 100-acre parcel with two vacant schools at the edge of the Manila dunes. The schools have been converted to a community center, which now is actively used. Space in the buildings is also sometimes rented, bringing income to continue work to protect the dunes and provide access to them.

### Bay Guide Book

The *San Francisco Bay Shoreline Guide's* publication was appropriately celebrated by a walk from Crissy Field to Fort Point in San Francisco on April 29. Sponsored by the University of California Press, the walk was led by Senator Bill Lockyer, President Pro Tem of the State Senate, and Margot Patterson Doss, author of several books and many columns on walking. Here Ms. Doss (right) shares a light moment with Conservancy Board member and former Chair Margaret Azevedo. The *Guide*, prepared by the Coastal Conservancy, is available from bookstores and can also be ordered directly from the Conservancy.



For ordering information, call the Coastal Conservancy, (510) 286-1015.

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DEWEY SCHWARTZENBURG

### COASTWALK '95

The southern leg of Coastwalk 1995 began August 6 with a five-day trip along the San Luis Obispo County coast, starting at Morro Strand State Beach. The series of county-by-county shoreline hiking and camping trips that constitute the annual Coastwalk took off in June on the north coast and will conclude September 1 at the Tijuana River Estuary National Research Reserve. The Los Angeles segment started August 13, and the Orange and San Diego County segments start August 24 and August 27, respectively.

Coastwalk, a nonprofit organization, has conducted walks along the California coast every year since 1982 to promote the completion of a California Coastal Trail and to foster public awareness of the coast.

Each segment of the walk takes four to six days, covering five to ten miles of coastline each day, with some side trips up creeks or into dunes and hills. Gear is carried by a Coastwalk vehicle, and dinner is ready at the campsite, in a park or at another facility when the walkers arrive. In some areas Coastwalkers are escorted by guides knowledgeable about local flora, fauna, and geology.

The \$30 adult daily fee (\$15/day for students, \$12/day for children under 12) includes dinner and camping. For more information write to Coastwalk, 1389 Cooper Rd., Sebastopol, CA 95472, or call (707) 829-6689.

User group preferences played a key role in shaping the management plan, also funded by the Conservancy. Much

of the discussion in the course of about 70 public hearings revolved around limiting OHV use to protect the dunes and

to provide public safety. A preferred management alternative was selected by the Humboldt County Board of Supervisors and approved by the California Coastal Commission, thereby culminating years of extensive public hearings.

## UPCOMING

### Conference on Coast Redwoods, Forest Ecology, and Management

A Conference on Coast Redwood Forest Ecology and Management will be held June 18–20, 1996, at Humboldt State University. Environmental scientists from major California universities are inviting work on any and all aspects of redwood forest life, including ecosystems, watershed, genetics, insects, park management, forest restoration, and wood products. Prospective participants must submit a 250-word abstract or a poster title by October 2, 1995.

For more information contact John W. Le Blanc at U.C. Berkeley; e-mail: jleblanc@nature.berkeley.edu; or fax: (510) 643-5438.

### Land Trust Alliance National Rally '95

The Land Trust Alliance's "National Rally '95" will be held October 15–19, 1995, at the Asilomar Conference Center in Pacific Grove, California. Over 800 land trust leaders, land managers, volunteers, attorneys, appraisers, and public agency officials are expected to attend.

The Rally offers information on cutting-edge land transactions, the latest legal and legislative developments, and new perspectives on land trust work nationwide. More than 100 speakers will lead dozens of sessions on land transactions, fundraising, partnerships, conservation easements, land stewardship, and more. On October 15, five pre-conference seminars will be offered on negotiations, tax issues, organizational management, wildlife inventories, and planned giving. Dr. Reed Noss, a conservation biologist, will speak at the opening session on "Endangered Ecosystems and the Role of Land Trusts." The Rally will conclude with an evening reception at the Monterey Bay Aquarium.

For complete registration information, contact the Land Trust Alliance at 1319 F Street N.W., Suite 501, Washington, DC 20004-1106, or call (202) 638-4725; fax (202) 638-4730.

### "Spirit of the City" Workshop

"Celebrating the Spirit of the City—and the Magic of Water" is the theme of a wide-ranging workshop to be held in Portland, Oregon, October 17–19, 1995. It is offered in connection with the annual conference of the Waterfront Center, Washington, D.C., October 19–21. Planned around the theme of water as an urban attraction, the workshop is envisioned as both inspirational and practical. The focus will be on city spirit as manifested in public art, urban design, celebrations, and festivals, as well as on marketing the specialness of individual cities and other practical matters.

For more information contact Jackie Conn at the Waterfront Center, 1536 44th Street, N.W., Washington, DC 20007, or call (202) 338-6657, fax (202) 333-8952. ■

## Dear Subscriber:

Since 1985 we have offered this magazine free of charge to all who requested it. Now, as you may have guessed from the reader survey in our winter/spring issue, we are moving toward paid subscriptions. If you returned your questionnaire, you will still receive the fall 1995 issue free of charge. Beyond that, we'll let you know as plans develop.

The survey was designed to find out whether we are rendering a useful service, to whom, and how. The results were gratifying. Respondents included a high proportion of government officials, natural resource managers, environmental professionals, conservationists, people who come to the coast for recreation and sports, teachers, and coastal or bayshore residents.

- More than 75 percent stated they keep the magazine for two months or more, pass it around to others, and/or give it to a library. More than 84 percent said their copies are read by more than one person. Seventy-seven percent read most of the magazine, 21 percent read about half. Sixty-three percent rated *Coast & Ocean* "excellent"; 36 thought it "good"; less than one percent rated it "fair"; less than one-half percent thought it "poor."
- The predominant use of *Coast & Ocean* is as a source of information on coastal issues; more specifically, it is used as a resource for planning decisions or for related studies and projects. The second most common use is for education, both in classrooms and in business or commu-

nity situations. Numerous subscribers also stated they use the magazine as a guide to opportunities for personal involvement with coastal concerns and for personal enjoyment.

- Some readers stressed that much of the information in *Coast & Ocean* is not available elsewhere. Others said they valued the unbiased, balanced, in-depth reporting, which enables readers to see various sides of issues.

To continue, we need to start paying our way. This is not only necessary, it's a good idea: It will assure that we send the magazine only to those who want it, and at the same time, enable us to expand our circulation.

Rasa Gustaitis  
Editor

Editor:

I live south of Big Sur, along one of the most pristine coastlines of California. My husband, John Smiley, manages the University of California's 4,000-acre Big Creek Reserve, which is set aside for higher education. College classes, graduate students, and professors come here to observe habitats with few human impacts and record baseline data. I taught junior and senior high school science in the Pacific Valley Unified School District and am now writing an outdoor curriculum that focuses on developing students as "Local Experts."

Five years ago, our school received a grant from the California Department of Education which allowed students to research aspects of their environment and share their findings with peers. Each student picked a topic. Most chose a plant or animal, but some selected physical influences (such as tides, currents, waves, and fire) or relationships between organisms.

In the course of this program, I noticed that as the students' interest in their topics grew they became empowered. They began to think independently, became excited about what they discovered, turned to scientific literature for more information, and began to develop into informed, concerned citizens.

At first, some students studying organisms would report that their organism was not acting as described in the textbook. After careful observation and some experimentation, they found that these organisms were adapted specifically for our central coast habitat. Searching further in the scientific literature, they found that the behaviors they had observed had usually been recorded, but in obscure technical journals. As they became "local experts" about their subject, these students voluntarily began to monitor natural fluctuations. They became concerned whenever human impacts threatened

their organism. Some students recognized a need to change certain management policies.

They wrote up their topics as chapters in habitat-specific books. They also taught their topic to the general public during Big Sur Creek's annual spring open house. One adult visitor commented: "How wonderful it is to see families and adults learning from a sixth-grader and, when the lesson is finished, hear the sixth-grader ask the adults: 'What did you learn today?'"

By the end of this program many of the students had acquired the status of "local expert" on their chosen subject within the community. A local resident who was considering whether to start an abalone farm discussed his plans with Ezra Comello, a ninth-grader who had studied mariculture. A teacher looking for some facts about barnacles was directed by students to Hope Rose, who had barnacles as her topic two years ago.

I believe that anyone can become a local expert. It does take some time (exploring an area, doing general research on a topic of interest, and making detailed observations), but the benefits are tangible. Local experts can see firsthand how their habitat is important, because no other habitat is exactly like it. Local experts spend a lot of time monitoring their chosen organism, phenomenon, or field and can easily become the "eyes" for agencies that are stretched too thin because of budget cuts. The activities of local experts can help to improve the habitat for some organisms and, ultimately, improve their own habitat. It is personally rewarding to know that as a local expert you are helping to take care of the earth.

I believe that *California Coast & Ocean* would make an excellent forum for Californians who live by the coast and who care about sustaining this interesting habitat. Together, we readers could gather information about our coastal

habitat that would be prohibitively expensive for any agency or scientific researchers to collect. Our observations could be used by the scientific community and policy makers to make decisions. *Coast & Ocean* could perhaps coordinate our many efforts and make sure that they are as well focused and scientifically sound as possible. Each place is different; all are connected. I can offer data that were collected in a practically pristine area and can be used as a baseline. Would anyone like to join me and take this idea further?

Kim Smiley

Big Creek Reserve, Big Sur, CA 93920, (408)  
667-2543 or ksmiley@cats.ucsc.edu

Editor:

I just finished reading Eleanor Ely's good article, "Testing the Waters They Know Personally," and wanted to add a note. For several years I had a dream of forming a student monitoring group to check the waters entering the Tijuana River National Estuarine Research Reserve. Efforts to realize this dream were slowed by limited staff and funds, the inconvenience of researching and ordering chemicals from several sources, and uncertainty on how to stimulate continuing interest in water testing when the creeks only run intermittently. This past year several factors merged to create enthusiastic water monitors throughout San Diego County.

The key ingredient is a convenient, student-oriented water-testing kit with nine tests and curriculum developed by the San Diego County Water Authority. It is available free (on loan) to middle and high school teachers, along with training, through local water districts or conservation districts. Currently, data are voluntarily entered on a local computer bulletin board, but we all hope our findings will soon be available over the Internet. In Imperial Beach, this kit became the core of a program that links the Watershed Project (which includes

AmeriCorps Volunteers) with fifth-grade students at Bayside School and the Intersession Classes studying at the Reserve, the Reserve, and the Public Works Department of Imperial Beach (PWD). Students are testing water from storm drains entering South San Diego Bay and the Reserve and reporting their findings to the PWD. They are also analyzing gutters and storm drains throughout the city using PWD worksheets, and getting recognition for meaningful work well done. Under a permit from the U.S. Fish & Wildlife Service, Bayside students are also cleaning areas adjacent to the bay.

This is but a brief sketch of the kit and one project. Throughout the county, there are many other projects to note. The city of Tijuana is among communities interested in adapting the kits for their use. Kits can be purchased and even modified for places with different water chemistry profiles.

To find out more about:

- the water testing kits/programs, contact Ivan Golakoff, San Diego County Water Authority, (619) 682-4131;
- linking programs with PWD, contact Hank Levine, Imperial Beach PWD, (619) 423-8311, ext. 4;
- the Watershed Project, contact Merle O'Neill, Daedalus Alliance for Environmental Education, (619) 793-0411.

*Pat Flanagan, Director of Education  
San Diego Natural History Museum  
(formerly Education Coordinator, Tijuana  
River NERR)*

Editor:

For the last five years, I have been conducting research on the thermal physiology and behavioral ecology of white sharks. My field experience with white sharks in California and in South Australia has allowed me to witness both natural behavior and chum-induced behavior. After reading your recent article (Winter/Spring 1995) on Mr. Cappella and the chumming issue, I wanted to respond, first to Mr. Cappella and his statements, and then with regard to the chumming issue and the impact of chumming on white shark behavior.

Mr. Cappella states that he is "performing a public service" and is helping



**Shark and seagull**

people witness and study white sharks. He also says a side aim of his operation is to "counter Hollywood myths and educate the public." Later in the article he states that the "lack of firm scientific evidence" that chumming alters white shark behavior will work "in his favor if the issue finds its way to the courts." His latter comment seems somewhat contrary to his goals of providing a public service and educating people. Altering the water column with chum only allows people to see the shark in an altered state of behavior, not a natural one; therefore, people are not being educated about the natural behavior of white sharks. They are getting a false impression of white sharks. Mr. Cappella appears to have little or no regard for white sharks or their future as part of the ecosystem, for he seems willing to manipulate them without knowledge or concern about potential consequences.

Chumming in nearshore waters would certainly increase the danger to recreational water users because the behavior of the animal has been changed, artificially, from a stalking or hunting state to a feeding state. These animals are searching (stalking/hunting) for prey on a pretty continual basis, and research indicates they may be able to differentiate between objects of different shape and size. They do not attack or bite everything they encounter in this behavioral state. However, in a feeding state of behavior, they appear less specific about objects they will bite. I have seen white sharks bite several different non-prey items (e.g., small floats) while in this behavioral state.

Chumming for white sharks on any

kind of continuing basis has the potential to increase the number of sharks in a given area and to change the behavior of the sharks by habituating them to an unnatural food source. Habituation could alter the dynamics of the predator-prey relationship between white sharks and pinnipeds, which would affect other animals and the ecosystem as a whole.

I feel there are three main problems with the TriSharks operation: The boat is too close to shore; they use mammal blood and parts in their chum; and they have consistently chummed in the same location on all of their trips. South Australia has had to deal with this issue for many years and now has several regulations in place, such as a 3 km limit offshore to chum, and no chumming around many pinniped colonies during breeding season. The researchers there are concerned about habituation, as the behavior around a chum slick is noticeably different from the natural behavior I've witnessed here in California. Consequently, they are starting to move to different locations on each trip as a preventive method, and will soon discontinue the use of mammal blood or parts in their chum. With NOAA's decision coming in the near future, it is to be hoped that this issue will soon become a non-issue.

*Ken Goldman  
San Francisco State University*

**The story on the Audubon Society's endangered species education program, scheduled for this issue, has been postponed to the winter '96 issue. Editor.**



R. S. ANDERSON

## KNOW YOUR COAST

**W**HY DOES WINDBLOWN SAND form ripple patterns? Why do these patterns have distinct, regular shapes? Why do large grains of sand rise to the ridges while small ones fall into the troughs? Scientists have studied sand ripples for more than a century, yet the elusive process of their formation has never been fully understood. Some answers have come from Robert Anderson, a geomorphologist at the University of California, Santa Cruz, who simulated the process working with Kirby Bunas of the university's Computational Math Program. Their computer model produced ripples of the correct shape, and showed why sand grains of different sizes fall as they do.

It has long been known that ripples occur when sand grains are picked up by the wind and travel short hops, usually at very low angles. This process is called saltation, from the Latin *saltare*, meaning to dance or to hop. Recent studies, carried out with high-speed film and using computer simulations, have shown that saltation inevitably forms ripples. Initially flat beds of grains in the computer models always become rippled, and the ripples migrate downwind. The saltating grains can dislodge and eject other grains as they hit the bed. In other words, grains are not only picked up and moved by the wind; they are also blasted off the bed by the impacts of other grains. This ejection of grains by impacts only occurs where there is wind; underwater ripples are subtly different from those on land.

The crests of the wind-blown ripples are coarser than the troughs because large grains are more difficult to eject from the bed and also because they travel shorter hops once ejected. Small grains can travel in hops that are several tens of centimeters long, and can leap from one ripple to the next; coarse grains take tiny steps up the ripple's windward face and finally hop over the top onto the steeper lee face. There they simply get stuck, high on the ripple, because all the smaller saltating grains are traveling at low angles to the horizon and don't impact the downwind faces of the ripples.

Typical sand ripples are about 10–15 cm in wavelength (crest to crest), only a few millimeters in height, are asymmetrical with shallow upwind slopes and steeper downwind slopes, and migrate downwind at rates that depend on wind speed. The ripple pattern looks much like a fingerprint, one ripple ending where another splits, or bifurcates, to become two. This fingerprint pattern is the focus of ongoing studies. Here the analogies with other patterns in nature, such as the stripes on zebras and the imperfections in crystals, may help to decipher the physics of the process.

—Robert S. Anderson

Robert S. Anderson is on sabbatical this year. He can be reached at the Department of Geology and Geophysics, University of Wyoming, Laramie, WY 82071-3006.

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