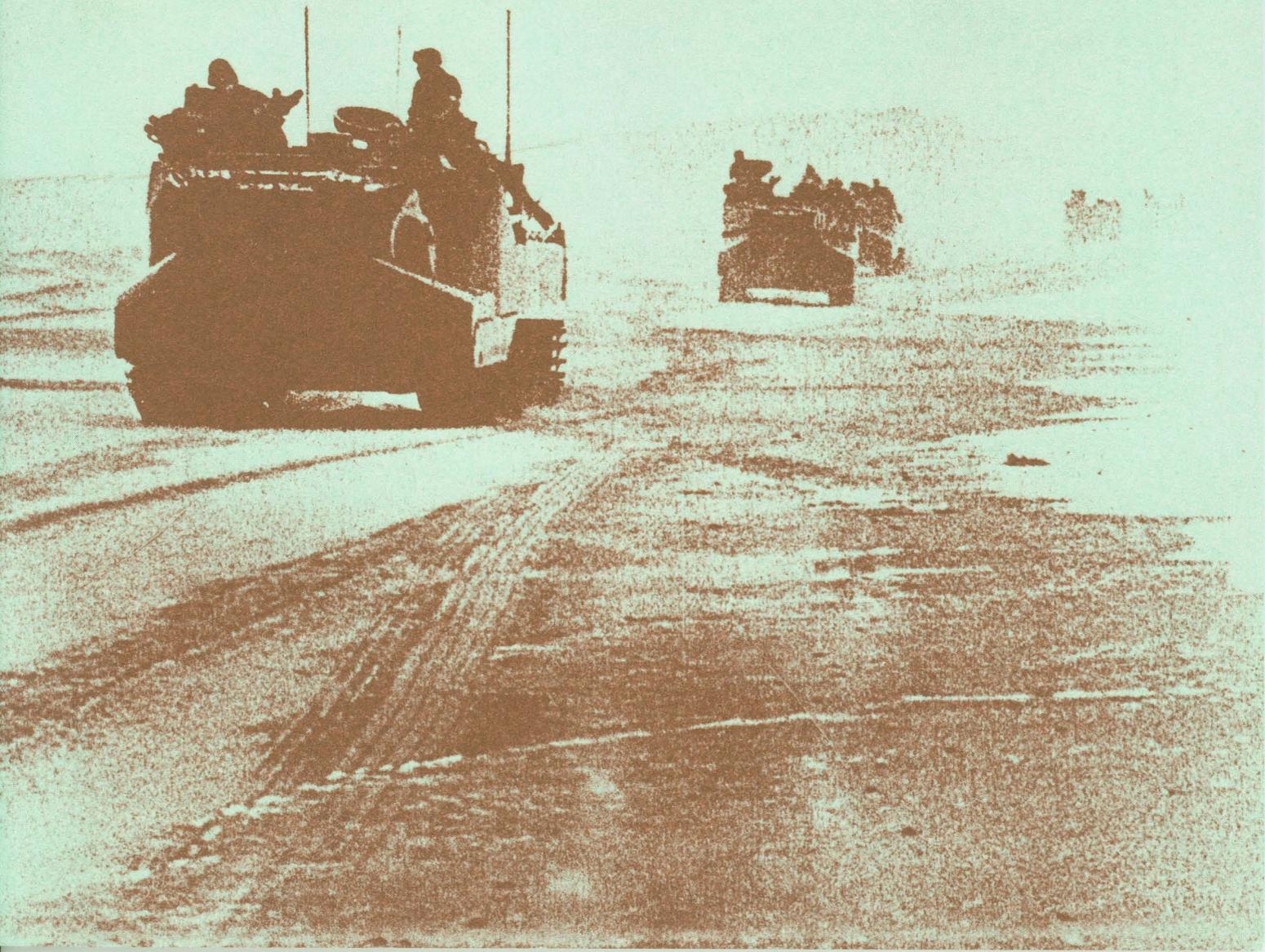


CALIFORNIA
Waterfront Age

WINTER 1988

VOL. 4 NO. 1



Guidelines for Contributors

California Waterfront Age is glad to consider contributions of articles and shorter items related to the state's waterfronts. We aim to provide a forum for the description and discussion of public programs and private initiatives relating to waterfront restoration and development in California. Resource management and economic development are our major themes.

We will consider articles of up to 3,000 words on the following subjects:

1. Economic development, project finance, waterfront restoration, the impact of changing uses.
2. Tourism, waterfront parks, public access.
3. Maritime industries.
4. Water quality, resource restoration, enhancement.
5. Cultural and historical issues.

We will also consider the following shorter features:

Conferences: We publish summaries of waterfront-related conferences.

Book reviews: We seek relevant reviews, about 500 words in length, of current books and other publications of interest to our readers.

Essays: Reflections on themes related to waterfronts are welcome. They can be verbal, photographic, graphic, or in cartoon form.

Interested contributors should call or write the editor. Send self-addressed stamped envelopes with submissions.

Are you on our mailing list?

To receive *California Waterfront Age*, or for information on the programs or projects of the State Coastal Conservancy, please send a note with your name, organization, address, and affiliation (civic group, government agency, consultant, development/financial, maritime industry, other) to:

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U.S. MARINE CORPS PHOTO

Cover: U.S. Marine Corps amphibious assault vehicles at Camp Pendleton.

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**Protecting the
Huntington Wetlands**
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PEARL HARBOR awakened us to the reality of war with an awful bang. Our global and domestic environmental crises are unfortunately less immediate in their impacts on our awareness. The consequences of vanishing tropical rain forests and wetlands, the puncturing of the ozone layer (ironically a by-product of our attempts to keep ourselves and our beverages cool), the poisoning of our lands and water with chemical wastes, and the continuing loss of our open lands, have yet to be really felt. Only the old people remember the effects of the Depression era dustbowl; and the regions of the Sahel and Ethiopian droughts are far away—out of sight, out of mind.

Some years ago, Bertram Gross propounded the “crisis theory of planning.” If memory serves, it

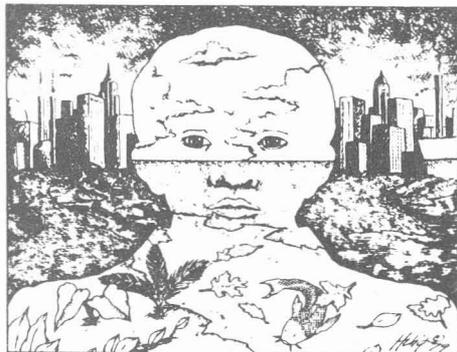
went roughly like this: nothing happens unless and until a crisis is perceived by those in a position to do something about it, and they choose to act. In fact, there are signs that many such people exist, and that they are indeed starting to act positively. The evidence lies in the recent multinational accord on chlorofluorocarbons (not enough, but a start), the passage of legislation to regulate use of tributyltin, and the burgeoning of land trusts. On the one hand, these problems are solvable with our present knowledge for the most part; but if they are not solved, they are, taken together, likely to destroy human civilization and its terrestrial home as we know it.

Such solutions involve a serious rethinking of many of the premises that guide the way we live and do business. The adoption of doctrinaire positions regarding everything from “Spaceship Earth’s” integrity to the rights of property (in the absence of a reasoned consideration of public rights as well) have proven to be counterproductive. The

current vogue of “environmental mediation” and “conflict resolution” methods, replete as it is with the usual mushrooming of consulting expertise and doctrinal discussions of terminology like the appropriate uses of “conflict” and “dispute,” nonetheless indicates a new spirit abroad in the land. This is a spirit of communication and compromise, a greater willingness to reason together to seek mutually acceptable solutions. The reason for this should not be especially mysterious: Love Canal, Three Mile Island, the deadly pollution of the Rhine, Union Carbide in Bhopal, Chernobyl, the toxic danger of the Stringfellow pits, second stage smog alerts, the Gulf of Mexico oil spill, the death of the Black Forest, the hole in the ozone layer over Antarctica, the rapid disappearance of the Amazonian rain forest, and the spread of deserts around the globe have finally begun to have an impact on our perception of the effects our actions are having on our surroundings. We seem closer to the man-made Cadillac Desert than to the dream of the flowering desert in *Dune*. Hence, we now appear to be a little readier to talk first and shoot later, if at all.

As always, money talks . . . and another promising sign is the gradual spread of more imaginative ways to finance environmental protection efforts. Several states are now using, or considering the use of, revenues from less common sources to fund the purchase of agricultural, wetland, coastal, and other vanishing natural resource lands. These include real estate transfer and documentary stamp taxes, “sin” taxes on cigarettes and race-track wager revenues, and various user-oriented levies like tourist impact taxes. People’s growing impatience with the rate of progress is reflected in, for example, the gathering of many more signatures than needed to place a \$778 million land acquisition bond initiative on the 1988 ballot. Regardless of the detailed merits or limitations of this particular proposal, it would appear to be a signal to our leaders that further movement to finance en-

Continued on Page 48



DAN HUBIG

Sonoma Wetland Enhancement

A grant of up to \$1.2 million to the Gold Ridge Resource Conservation District, authorized in October, will support a 5-year program to repair critical erosion sites in the Estero Americano and Salmon Creek watersheds, which have damaged, and continue to damage, coastal wetlands. The erosion is caused largely by poorly built roads, gullies, and stream bank failures. It leads to excessive sediment deposition in the coastal wetlands.

The Gold Ridge District, implementing the Sonoma County Coastal Wetlands Enhancement Plan, will manage the program. It will repair critical erosion sites on largely private land with the cooperation and assistance of landowners together with local and state agencies. In Salmon Creek and its tributaries, salmon and steelhead spawning and nursery habitat will be restored.

Sand City Restoration Plan

A grant of up to \$50,000 to Sand City, Monterey County, also authorized in October, will assist the city in preparing a coastal restoration plan for about 1.5 miles of ocean-fronting coastal dunes west of Highway 1.

The plan will address two unresolved issues that have impeded implementation of the city's certified Local Coastal Program (LCP) and may jeopardize future development in Sand City. These are: the extent and location of rare and endangered species (at least six endangered species or candidate species are known to exist in Sand City), and shoreline erosion.

The restoration plan will resolve these issues by identifying strategies to ensure the preservation of endangered species, address the Coastal Commission's concerns about shoreline erosion and public access, and locate appropriate sites for development consistent with the city's LCP. The plan will also present specific proposals for implementing these strategies, which will be incorporated



PETER GRENNEL

Erosion control in Sonoma County.

in the city's LCP. The proposals will rely heavily, if not exclusively, on local resources for implementation. The city, in cooperation with local landowners, will contribute the remainder of the estimated cost of \$100,000 to prepare the plan.

The Sand City effort parallels activity underway in the neighboring city of Marina, extending efforts to protect this entire fragile dune area, one of only three on the state's coast.

Crescent City Waterfront Access

Also in October, the Coastal Conservancy authorized a grant of up to \$150,000 to Crescent City, Del Norte County, to implement Phase I of the city's waterfront access program in conjunction with constructing a new fishing pier at the foot of B Street. A 12-foot-wide trail will be built from Battery Point to a point east of the pier; a new shoreline observation point will be developed directly across from the Battery Point Lighthouse, which is popular with coastal visitors. A new staircase and wheelchair-accessible ramp to the shore will be built at Battery Point. Throughout the project, landscaping and street furniture will be installed, featuring logging and fishing themes.

Humboldt Bay Dunes Plan

On the north spit of Humboldt Bay, a Conservancy grant of up to \$108,000 will help the Nature Conservancy to protect, enhance, and provide public access to 113 acres of coastal dune habitat. The grant will allow the Nature Conservancy to expand the Lamphere-Christensen Dunes Preserve, which will be managed as part of a proposed Bureau of Land Management-Louisiana Pacific-Nature Conservancy Joint Management Area. The Nature Conservancy will eradicate non-native dune vegetation and replace it with native species, which are now threatened by the non-natives. Vehicular access will be prohibited, but a pedestrian access trail will be developed and kept open for unrestricted public use. Public access and education will be emphasized in the preserve's management.

Richardson Bay Wildlife Ponds

The wildlife habitat value of five freshwater ponds at the edge of Richardson Bay, on the Tiburon Peninsula in Marin County, will be enhanced and restored with the help of a grant of up to \$34,000 to the Richardson Bay Sanctuary District. The district will dredge and reconfigure the ponds to create feeding and refuge areas for San Francisco Bay shorebirds and waterfowl during storms, and nesting space for certain species whose young cannot tolerate high salinity levels.

Pacifica Bay Boulevard Access

The city of Pacifica in San Mateo County will build a beach access stairway in the Sharp Park area, which draws some 130,000 visitors yearly, with the help of a Conservancy grant of up to \$50,000, also approved in October. This accessway is part of Phase II of a comprehensive shoreline protection and public improvement project, which has been underway since 1982. The Conservancy contributed \$401,600 for the stairway, pedestrian



KEN DOWNING

promenade, benches, and other improvements in Phase I of the project. The Conservancy's funding will enable the public to walk to the beach over an otherwise inaccessible rip-rap barrier.

Newsletter for Nonprofits

The Coastal Conservancy publishes a newsletter, *The Coastal Community*, semiannually as part of its nonprofits technical assistance program. The newsletter describes projects that recently have received Conservancy grants and contains progress updates on previously funded projects. Articles have described successful coastal land trusts, discussed the effect of federal tax law changes on real property donations, and explained coastal resource conservation bills before the state Legislature. Book reviews and technical assistance articles are also included. To be on the mailing list, write: Editor, *The Coastal Community*, State Coastal Conservancy, 1330 Broadway, Suite 1100, Oakland, CA 94612.

Conservancy Publications Cited

Warren's Waller Press has won a major award from the Printing Industries of America for the Coastal Conservancy's *Public Beaches: An Owners' Manual*, written by Thomas H. Mikkelsen and Donald B. Neuwirth and designed by Anna V. Kondolf. The book was chosen from a field of 6,700 entries as best of category in a graphic arts competition, receiving one of 57 top awards. Mechanical production was by Kyle Houbolt, typesetting by Another Point, Inc. The Winter 1986 issue of *California Waterfront Age*, also designed by Kondolf, received a certificate of merit. □

Conference Log

Antiquated Subdivisions Conference

A small but committed group of planners, attorneys, and policy makers from several states met with a contingent of Japanese engineers last May 17–19 in Honolulu to compare notes on an esoteric topic: the redevelopment of inappropriately designed subdivisions. The conference, the latest in a series organized by the Lincoln Institute of Land Policy, was also sponsored by the Florida Joint Center for Environmental and Urban Problems, the University of Hawaii, and the California Senate Subcommittee on the Redevelopment of Antiquated Subdivisions. It gave Americans, who are just beginning to wrestle with the issue of what to do when patterns of land ownership conflict with environmental constraints or development requirements, a chance to hear how the Japanese have successfully tackled the issue for more than 20 years.

Kukaku seiri is what the Japanese call their technique. They have used it to rationalize rural and feudal ownership patterns to make way for a modern street pattern, provide for park and open spaces, and install urban infrastructure. Each landowner contributes his land to a common land readjustment association or to the local government, and in turn receives a reconfigured, slightly smaller parcel, but one that is provided with urban services and thus more readily capable of development. All costs of installing infrastructure and administering the program are recovered by selling parcels retained by the association or government. *Kukaku seiri* thus avoids the two most serious problems associated with redevelopment projects in America: the high price of land acquisition and the resistance of the local residents to being displaced.

The Norwegians apply a similar system, which they call "land consolidation," to adjust agricultural land holdings; the Australians call their system "land pooling." In California, the Coastal Conservancy's

"coastal restoration" program is meant to accomplish the aims of subdivision redesign, but to date it has used only public acquisition techniques and not ownership pooling. However, at the beginning of the legislative session, California Sen. Marian Bergeson introduced a bill that would create a new Land Readjustment Law for the state to promote ownership pooling. The proposed legislation, SB 442, was inspired by the international experience, but was developed through an elaborate consensus-building exercise and grafted into the state's existing legal framework. This legislative package was extensively reviewed at the Honolulu conference, eliciting a comment from one of the Japanese experts that it compared favorably with the existing Japanese procedures. However, other faculty members cautioned that similar legislation has met repeated roadblocks in both the Florida and the Hawaiian legislatures, due primarily to the distrust of the small landowners. (Similar distrust surfaced in California, and SB 442 stalled in the Assembly committee after passing out of the Senate.)

Highlights of the conference included comparisons of landowner attitudes in various states and countries, and introduction of a slide show and a comic book that the Japanese have produced to explain the concept of *kukaku seiri*. Representatives of the Golden Gate Landowners Association impressed the group with their story of contacting and organizing literally hundreds of thousands of small lot owners in Florida to promote the private consolidation of platted lands. Two new publications were presented to the conference: *Land Readjustment: The Japanese System*, edited by Luciano Minerbi and available from the Lincoln Institute of Land Policy (26 Trowbridge St., Cambridge, MA 02138), and the inaugural issue of a new periodical, "Land Assembly and Development: A Journal of Land Readjustment Studies," available from Florida Atlantic University (c/o FAU/FIU Joint Center, 220 SE Second Ave., Fort Lauderdale, FL 33301). —Don Coppock

Offshore Drilling Conference

A national conference on the implications of the U.S. Interior Department's five-year plan for offshore oil drilling, sponsored by the American Ocean Foundation, drew participants from California coastal communities and from New England, the Gulf states, and the Pacific Northwest to Los Angeles on November 9.

Concerns about environmental impacts were discussed. They include air pollution, inability to clean up or contain oil spills at sea, ocean dumping of drilling wastes, the unavoidable displacement of commercial fishing, and considerable impact on coastal tourism.

For more information on the conference and on a second conference to be held in October 1988, write The American Ocean Foundation, Box 9527, San Rafael, CA 94912. Telephone: (415) 485-5933. Videotapes are also available from Century Cable, in Santa Monica, (213) 829-5111.

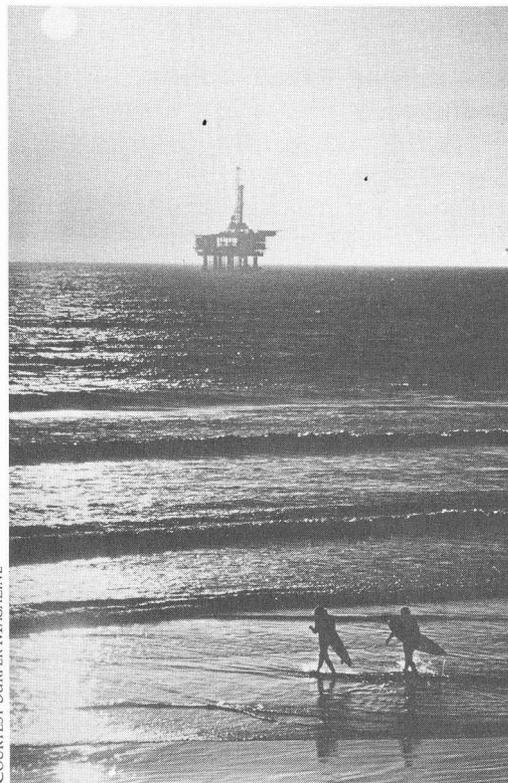
For more information on the public hearings, write to: Minerals and Management Service, Pacific OCS Office, Attn: Leasing and Environment, 1340 W. Sixth St., Los Angeles, CA 90007. (213) 894-6619.

—Nanette Alforque

Mitigation of Wipeouts

The recent Supreme Court decisions of *First English Evangelical Lutheran Church v. City of Los Angeles*, *Nollan v. California Coastal Commission*, and *Keystone Bituminous Coal Association v. DeBenedictus* prompted a lively discussion at a recent conference. Called "Wipeouts and Their Mitigation: The Changing Context for Land Use and Environmental Law," the Fifth Annual Donald G. Hagan Commemorative Program attracted legal and planning practitioners and academics from around the country to the University of California, Los Angeles Extension, October 29-30.

Using the term coined years ago by Hagan, one of the founders of modern plan-



COURTESY SURFER MAGAZINE

ning theory, the conference focused on the permissibility of government imposed "wipeouts"—reductions in property value due to regulation—in light of recent Supreme Court rulings.

There was near unanimity of opinion that these court decisions do not presage a major change in the standards courts will use to review land use regulations. Moreover, with improvements in planning techniques instituted in recent years, land use regulations are very likely to meet the standards that are to be applied.

The *Nollan* case, which struck down a California Coastal Commission permit condition requiring the dedication of a lateral beach accessway, was described as generally restating a long line of cases requiring that some clear "nexus" exist between a detriment caused by a proposed development and an exaction imposed as a condition of regulatory approval. (See Professor Joseph Sax's article discussing *Nollan* in the Summer 1987 issue of *Waterfront Age*.) Several presenters urged that focusing on the nexus require-

ment will merely lengthen the development permit process to the detriment of all concerned, without significantly changing the outcome.

The *First English* case held that when property regulation amounts to a constitutional "taking," owners are entitled to "just compensation" damages for the interim period prior to institution of a successful lawsuit to overturn the regulation. (A prior California case had held that invalidation of the regulation without damages was the only remedy.) Conference presenters were in agreement that this decision, too, will not dramatically change the ability of government to regulate land use. One panelist, a self-proclaimed developers' attorney, argued that the decision does not help the development community since damages are not a good substitute for development approvals.

In perhaps the least dramatic of the three cases discussed, *Keystone Bituminous Coal*, the Supreme Court made clear that it will uphold regulation with severe economic consequences for property owners if the regulation is supported by a legitimate public purpose. This decision illustrates that the current Supreme Court is far from supporting a revolutionary restructuring of property rights and permissible regulation.

According to Sax, who delivered the keynote address, regulation of all types, including land use, is so widespread and so inextricably linked to social and economic factors, that a major change in the Court's view of this regulatory power would effect a fundamental restructuring of American society. Yet the Court has demonstrated no inclination to overturn 50 years of Supreme Court precedent upholding overtly redistributive regulation, and the social and economic policy based on it.

Conference presenters discussed the use of transferable development credits and other methods of mitigating the impact of "wipeouts" and concluded that these programs would likely withstand scrutiny if founded on appropriate planning analysis.

Possible legislative proposals to limit the "friction" of land use regulation were discussed, such as legislation that would clarify the procedure for exhaustion of administrative remedies prior to institution of a takings lawsuit or legislation creating expeditious dispute resolution.

—Barry Epstein

To order the conference proceedings, to be published in a year, contact the Public Policy Program, UCLA Extension, 10995 Le Conte Ave., Suite 731, Los Angeles, CA 90024. (213) 825-7885.

Orange Coast Conference

Beaches, wetlands, and small craft harbors along the Orange Coast were the focus of the Orange Coast Conference held November 4-6 in Huntington Beach.

Experts and speakers from a wide variety of interests helped local officials and members of the public to understand the complex issues involved in coastal zone management.

Local officials described the issues to natural scientists who explained how to identify, preserve, and restore coastal wetlands and shared their expertise in coastal processes and the effects of the works of man along the coast.

A panel of legal experts chaired by Justice Steven J. Stone of the Second Appellate District discussed the impact of recent Supreme Court land use cases.

Representatives of many state and federal agencies described their work in the region. The new district engineer for the area, Col. Ted Ono, gave an overview of the Army Corps of Engineers' activities.

The conference was sponsored by the American Shore and Beach Preservation Association and the Coastal Zone Foundation. For more information, contact Orville Magoon, president of the American Shore and Beach Preservation Association, PO Box 279, Middletown, CA 95461. (707) 987-2385.

—Katherine E. Stone

IN THE
SHADOW
OF THE
MINUTEMAN

by Rasa Gustaitis

● ONE OF THE BEST-KEPT military secrets along the California coast is the role the Armed Forces play in preserving natural lands, the habitat of rare and endangered species, and archeological sites. Behind the fences of Army, Navy, Air Force, and Marine bases, particularly in the southern and central parts of the state, lie some of the last pristine coastal landscapes. The deadliest weaponry, devised to ward off—or to be employed in—global war, inadvertently serves to protect life forms that are almost everywhere else threatened by roads, buildings, and other human intrusions.

This is not to say that the Armed Forces now run covert operations in support of species on the brink of extinction. Resource protection is, in large part, a byproduct of military activities that require extensive open space. Since the 1960s, however, that protection has been mandated by federal and state laws. Military institutions, like other public agencies, must abide by the National Environmental Policy Act (NEPA) of 1969, the Migratory Bird Treaty Act, the Endangered Species Act, the Clean Air and Water acts, related federal laws and regulations, and, to a limited degree, the California Coastal Act. The state Act applies when activities on federal land have an impact beyond that land's boundaries, as when air, water, toxic wastes, or migratory birds are at issue.

Since the passage of NEPA, all major bases have hired biologists and natural resources specialists who review construction projects, work with the Fish and Wildlife and other resource agencies, and sometimes initiate restoration projects.

As traffic on the highways has increased with development, birds on the Pacific Flyway have lost breeding and wintering grounds. Were it not for the sanctuaries maintained on military bases, many species' survival prospects would be far dimmer than they are now. Likewise, it is virtually certain that little of the natural shoreline would remain in central and southern California, and that significant archeological and historical sites would be lost, were it not for military bases that need wide open spaces for their missions. Six major bases hold 254,000 acres along 61 miles of coast between Monterey and Oceanside, plus some offshore islands. Smaller installations are scattered along the coast.

Vandenberg

The longest stretch of California coastline under military control, 35 gorgeous miles, belongs to the 98,400-acre Vandenberg Air Force base, "SPACE & MISSILE COUNTRY," as a welcoming billboard proclaims. Fifty-five miles north of Santa Barbara, Vanden-

"Defend the resources

which make this

country worth defending "

berg was the nation's first missile base and has launched more satellites than Kennedy Space Center.

But ecologist Michael McElligott, of the Vandenberg environmental task force's natural resources group, thinks far less about space conquest than he worries about alien invaders in the plant realm. Everywhere he looks he sees Andean pampas grass and South African ice plant. Both spread insidiously, hang on tenaciously, are worthless for native wildlife forage, and crowd out native plants.

It is not xenophobia that drives this mild man to wage war against foreign vegetation. His charge is to defend the natural landscape on the base, which stretches from the shoreline to a 2,100-foot mountaintop and includes a rich natural endowment. And despite his best efforts, the landscape appears to be losing.

Recently he reported in the base newspaper, the *Mesa Missilier*, how the Green Team, composed of prisoners from nearby Lompoc federal penitentiary, worked to beat back the weeds threatening the Lompoc yerba santa, an endemic endangered evergreen shrub long used as a remedy for respiratory infections and fevers. The men made some headway. But to eradicate the unwanted grasses from the entire base, a massive campaign would be needed.



COURTESY OF THE OCEANIC SOCIETY

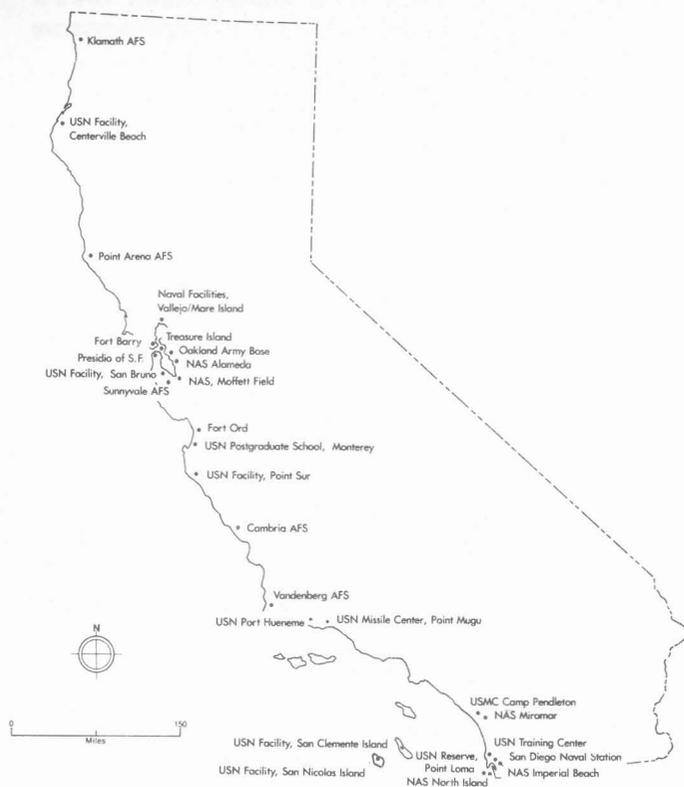
- Air Force

policy according to

Gen. Thomas D. White.

David Johnson, the artist, lives at the Naval Station on Treasure Island and attends 6th grade at Potrero Middle School in San Francisco. The only public access to the island is for visiting its museum.

Military Installations on the California Coast



"Each bush produces a million seeds," McElligott says, gazing darkly at seemingly endless waves of pampas plumes as he drives with a visitor toward the northernmost edge of the base. "It's invaded thousands of acres of Humboldt County already. If I can get rid of it here, that would be enough for one lifetime."

McElligott is primarily concerned with interactions among ecosystems and with "getting the [Vandenberg] mission accomplished with the least impact on the environment." A plan to remove willows from a stream bed for security reasons was scrapped, for instance, because it violated legal requirements for wetland protection.

The natural resources group also includes a wildlife biologist, an environmental planner, a range conservationist who looks out for the 35,000 leased grazing acres that supply beef for all federal penitentiaries in the state, and two archeologists to deal with 630 historical sites and properties. There are 70,000-year-old Ice Age mammoth bones here, 9,200-year-old Chumash village sites, rock paintings, pioneer homestead sites, U.S. Coast Guard rescue sites, and relics from the dawn of the Space Age in the mid-1950s.

McElligott loves his job, especially when it allows him to walk into the landscape, as now. Just below Point Sal, where the Casmalia Hills drop into the sea, he stops. To the south, the cliffs curve, then back away, yielding to a vast expanse of vegetated dunes. This is one of the last naturally stabilized dune-lands in the state. Below is the beach, running southward toward Purisima Point. Above, a red-tailed hawk circles, while below, a cormorant fishes and a sea lion lies on a rock. On the hills inland loom Minuteman launch facilities. Each missile has greater destructive power than all the conventional bombs exploded in World War II.

Descending to Minuteman Beach, McElligott walks to the shore across blackened sand—remains of an Indian midden. Waves break gently against white sand that stretches for miles, with not a sign of a human footprint or a tire mark. "And this is heavily traveled," he says. "To the south, I walk it once a month to make a count for the least tern people, the snowy plover people, and the stranded marine mammal network. That's about all the use it gets."

Human use, that is. For the shorebirds are here in abundance—Heerman gulls, whimbrels, plump little snowy plovers, long-billed curlews, and many more. A crowd of gulls is feasting on a female elephant seal carcass.

Next McElligott takes the visitor to San Antonio Creek. Upstream is Barka Slough, one of the largest wetlands in Santa Barbara County (shrinking because vineyards off-base have lowered the water table), and one of three large wetlands on Vandenberg. At the estuary is a pristine saltwater lagoon. At the trailhead a kestrel sits on a sign that warns against intrusion on the least terns who nest in the open dunes.

The back-dune vegetation is as diverse as the shorebirds were on the beach. It includes the strange giant coreopsis, also known as the Dr. Seuss plant, which occurs only here and in the Channel Islands. Closer to shore, sand verbena holds a layer of sand on sticky leaves as protection against blowing sand. If

Vandenberg

a pre-Columbian landscape still exists anywhere, this surely is it.

Access is restricted. Scholars visit by special arrangement, and Native Americans come to gather medicinal herbs, and the willows and rushes they use in basketry. McElligott occasionally leads bird and plant walks organized by the local chapter of the Audubon Society and escorts school children to the tide pools. For the general public, there is access to five miles of beach at the Santa Ynez River mouth, through a 36-acre county park. Fishing is allowed from a pier. Swimming and surfing are forbidden. The waters beyond Surf Beach have been called the graveyard of the Pacific and Devil's Jaws, says McElligott, bracing against a fierce wind to walk to the shore.

There is much more to see—the spot where seven destroyers went down in 1923, following each other around a mistakenly identified point; Space Launch Complex Six, where a space shuttle launch is planned for 1990. A tour of Vandenberg is exhilarating. Near the main gate, however, McElligott's face again clouds. There, in front of a building, is a giant clump of pampas grass, deliberately planted, apparently, as decoration.

Point Mugu

The next major military installation to the south is the 1,600-acre Navy Construction Battalion ("Seabee") Center at Port Huene, the only deep-water shipping port between San Francisco and Los Angeles, and it's a busy place. But just a few miles further down the road, the Navy's Pacific Missile Test Center at Point Mugu includes Mugu Lagoon, one of Southern California's largest remaining wetlands. Only a small percentage of this 4,600-acre Navy facility is developed, and 2,000 acres are lagoon or salt marsh.

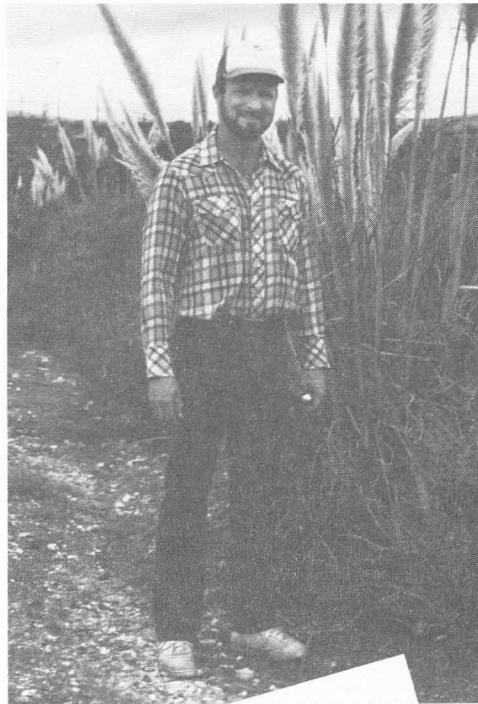
"This is one of the best salt marshes left," says ecologist Ronald Dow, standing at the mouth of the lagoon, which is free of rip-rap or other attempts to shape the coast for human uses. "We get thousands of birds in the



PHOTOS BY RASA GUSTAITIS

Minuteman Beach

Mike McElligott and insidious pampas grass.



Vandenberg

COURTESY OF U.S. AIR FORCE

Space Launch Complex Six, prepared for a space shuttle launch in 1990.

Camp Pendleton



RASA GUSTAITIS

fall. If there weren't this, they would be on beaches and in back yards, disturbed." More than 250 species have been counted, mostly between September and March. They include eagles, peregrine falcons, red-tailed hawks, short-eared and burrowing owls, six species of terns, lots of brown pelicans, great blue herons, black-necked stilts, and double-crested cormorants. Several clapper rail have reappeared since tidal action was restored to marsh areas formerly cut off by a roadbed. They had entirely vanished in the 1970s.

The Missile Center's conservation staff

also includes a botanist and a wildlife biologist who consult with specialists at the Santa Barbara Museum of Natural History; the University of California, Irvine; and with conservation groups in working with military authorities to safeguard this priceless refuge. They are also responsible for conservation on San Nicolas Island, 60 miles offshore, used for tracking military exercises. San Nicolas is home to the island fox and the island night lizard, unique to this and other Channel Islands. A Western gull colony and Brandt cormorants breed there, and 900 harbor seals, up to 18,000 sea lions, and 6,000 elephant seals were recently counted—three times the number of elephant seals seen a decade before. In 1836, missionaries removed the indigenous people to Santa Barbara, leaving behind one young woman who survived alone for 17 years. Her story is told in a children's book, *The Island of the Blue Dolphins*.

The Navy also owns San Miguel Island, which was used as a bombing range during World War II and for several years after, but is now managed by the National Park Service. It continues to both own and manage San Clemente Island, 60 miles west of San Diego, administering it through the Naval Air Station at North Island.

Coexistence with the wildlife is not always

Fort Ord

JIM MILTON



easy. At Point Mugu, coyotes sometimes wander on to the runway, and “there has been some problem of bird strikes with aircraft,” said Dow. “A large bird could take out an aircraft.” To reduce the runway’s attractiveness to birds, grass on the approach is kept 18 inches high. “Birds like to see,” he explains. When possible, training flights are scheduled around avian biological clocks.

There is no question of getting rid of the birds. They are protected. Even as Dow escorts the visitor back to the gate, several long-billed curlews peacefully peck in the tall grass at the end of the airstrip.

Seal Beach

It is dusk, and four people stop to watch the sunset reflect in the tidal creeks of the wildlife sanctuary on the Naval Weapons Station, Seal Beach. “One thing is certain,” says Pat Jones, environmental coordinator for the station. “If the Navy hadn’t owned it, it would all be gone.” Mike Silbernagle, biologist, and Chuck Weitz, civil engineer with the U.S. Fish and Wildlife Service, agree. To the southeast, rows of houses are silhouetted in the fading light. To the northwest is the city of Seal Beach. But here, in the midst of prime real estate, is this 911-acre marsh, remnant of the historical wetlands of Anaheim Bay.

The Navy acquired 5,000 acres of the Bay in 1944 to store ammunition for the Pacific Fleet. It constructed jetties, dredged a harbor, and built on the marsh. But in 1972, in reaction to a proposed freeway through the rest of the wetland, the Seal Beach National Wildlife Refuge was established, to be administered by Fish and Wildlife for the Navy.

Later, 110 acres of salt marsh were restored by breaching an old road, and preparations were made to restore more. Nature then continued the redesign, by shaping channels and forming new mudflats.

“Look at the *Spartina* coming back,” says Jones with satisfaction. The cordgrass is important to the clapper rail, which builds a floating tumbleweed nest amid its stalks, to rise and fall with the tide.

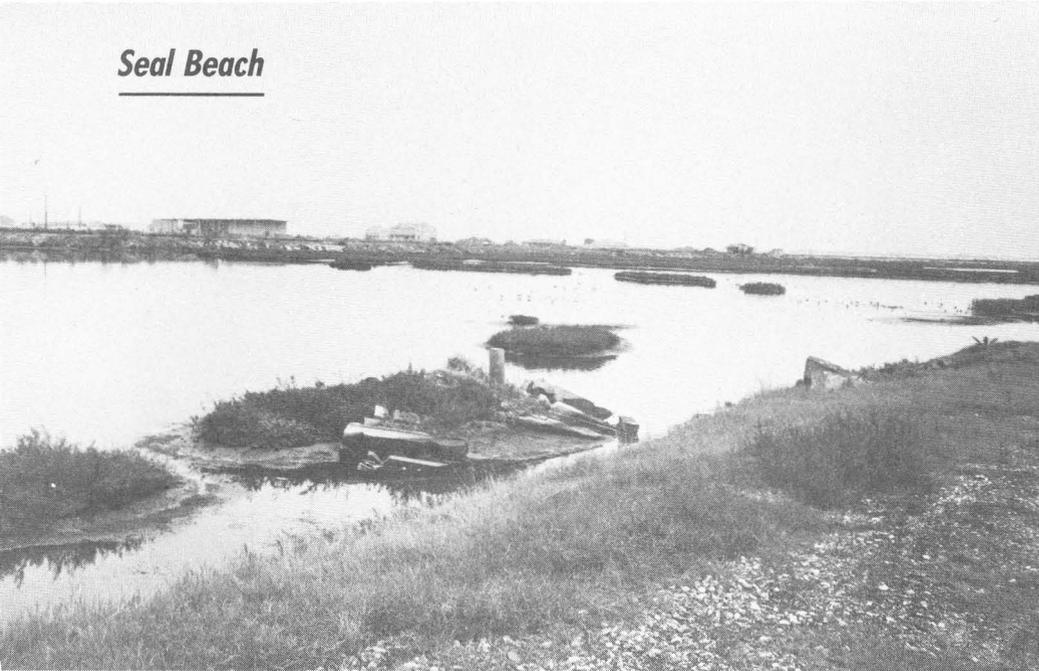
It’s begun to drizzle, but nobody is in a hurry. To stand here watching and listening awhile before getting onto the highway is earned reward for a day’s hard work.

Improvements have been made to make the marsh more attractive to endangered species. For the clapper rail—which is so shy that it is rarely seen—small wooden structures have been built, with tumbleweed attached. For the least tern, a 2.5-acre man-made island, built by the National Aeronautics and Space Administration for some earlier project, has been adapted.

Least terns migrate from Central America and Mexico in the spring and nest in colonies on open beaches. As long as the colonies were large, they could defend themselves by rising up in a cloud to mob and harass intruders. Five hundred swooping least terns could deter coyotes, foxes, and even men. But with the colonies decimated, the predator has the advantage. What’s more, these smallest terns can no longer simply move to new locations. Choices are scarce.

Therefore, NASA Island. It’s not on the coastal beach, but close enough. Last year, 69 pairs of terns fledged about 199 chicks—more than some larger refuges have tallied. Before the birds arrive in mid-April, the sand

Fort Ord, looking west from Route 1.



On Seal Beach wildlife refuge, Anaheim Bay.

Left to right: Patricia Jones, Mike Silbernagle, and Chuck Weitz

on the island is dragged to remove all vegetation. Four-inch pieces of red clay tile pipe, dipped in cement and rolled in sand, are placed at even intervals around the island, to provide shelter for the chicks and a way to count them. The plan seems to be working. To the north, the next significant refuge is at Point Mugu, about 80 miles away. To the south, there is Bolsa Chica nearby and then little more until Camp Pendleton in San Diego County. The birds follow flood control channels, foraging in the backwash of sea water.

Camp Pendleton

Southbound, just past San Clemente, and northbound, just past Oceanside, signs on the Pacific Coast Highway warn of "dust clouds next 16 miles." These are sometimes generated by training exercises at the 125,000-acre Marine Corps base. But most of the time the landscape is tranquil, the only unusual sight, perhaps, a convoy of military trucks inching down a steep inland hill.

Last year Camp Pendleton also had in residence a herd of 2,000 deer, 50 bison, 34 other mammal species, 230 species of birds—including three nesting pairs of golden eagles—and up to 400 least terns. It has the Santa Margarita, the last natural river in Southern California, and some beautiful beaches called the Red, White, and Blue.

Seven bison introduced in the 1970s from the San Diego Zoo have increased to 50 today, said Slater Buck, head of the wildlife management branch in the base natural re-



PHOTOS BY RASA GUSTAITIS

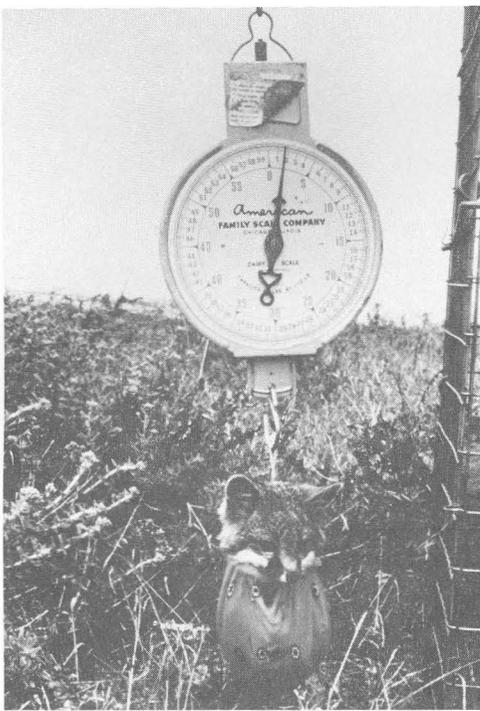
sources office. They range freely in the higher areas. Men in active training sometimes bivouac on a buffalo range.

Even as the Marine Corps is engaged in training A Few Good Men, the natural resources team makes valiant efforts on behalf of the other species. Least terns who find their way here are offered highly sympathetic, though not always successful, hospitality.

In March, a nesting area is placed off limits for training activities till mid-September, and surrounded by an electric fence. Its location varies because the beach changes drastically each winter. To keep the fence working is a task, not only because of the salt air and water.

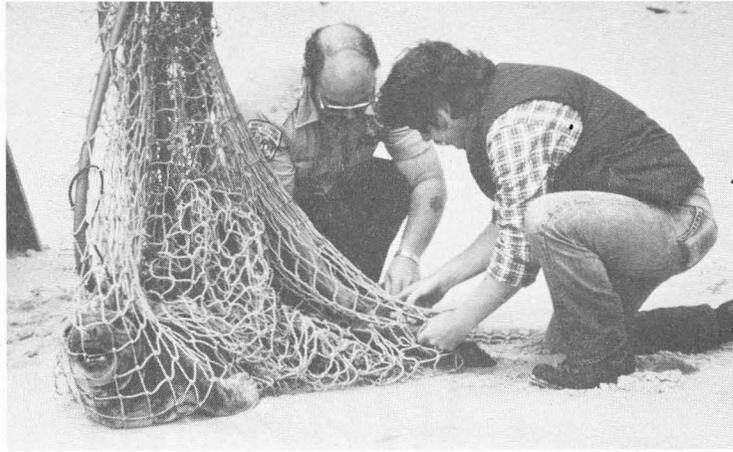
Last year disaster struck when someone stole the solar panel and batteries from the fence. This allowed a coyote to come in and take 35 eggs. Though four colonies of least terns on base made 192 nests, they fledged no more than 90 chicks, according to wildlife biologist Clark Winchell. That was many fewer than the previous year, when 172 nests produced 250 chicks. "Each year we try to improve protection," he said. "This year we'll have a secondary barrier, besides the electric fence. That's a ray of hope. But a lot of the predators are avian—goshawks, golden eagles—and some of them you don't want to remove. Still, this is one of the most productive least tern colonies in the state."

One reason why military lands are effective wildlife preserves is that they are mostly off-limits to the public. Fort Ord, an excep-



San Nicolas Island

Scientists study wildlife on San Nicolas Island.



OFFICIAL U.S. NAVY PHOTOS



tion, allows access to 16,000 of its 20,000 acres. The San Francisco and Monterey presidios are open bases.

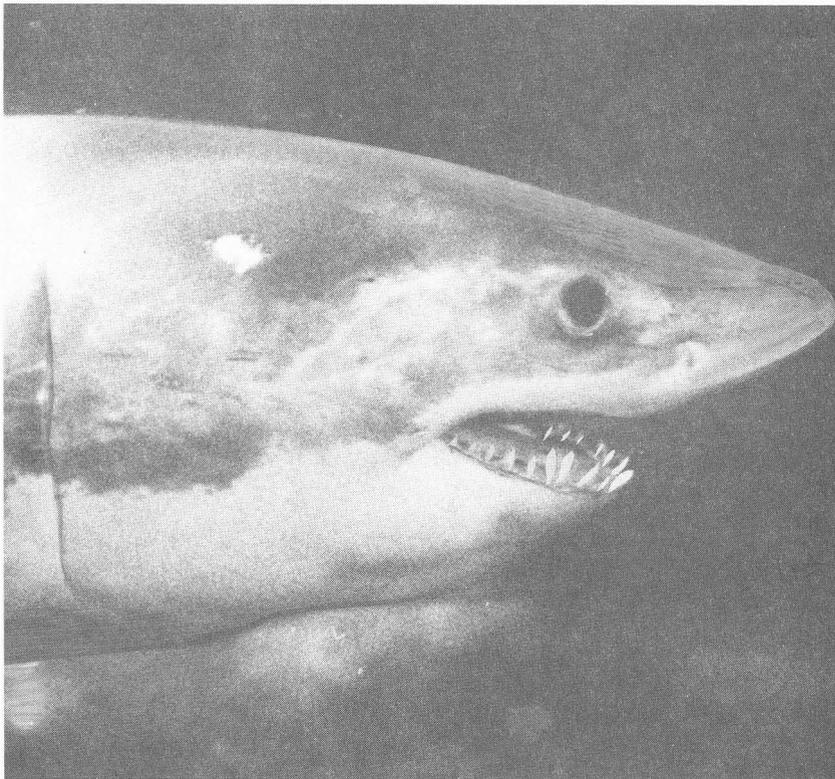
Some lands have passed on to the public. San Onofre State Beach is on lease from the Marine Corps, Mugu State Park has been relinquished by the Navy, and the Army has given the Salinas River estuary to the Fish and Wildlife Service. Access to other land is likely to become a bigger issue as existing beaches become more crowded. Meanwhile, were this land not in military hands, there is slim chance that it could continue to be protected as it is today. □



In the summer issue: When Military Land Becomes Surplus—The Recycled Military Coast

The Age of Aquaria

by Lee C. Ehmke



IN THE ARCHETYPAL aquarium experience, etched in memory, we moved in crowds through cavernous hallways lined with tanks holding bizarre and fearsome denizens of the sea. As we peered into dimly lit black boxes, the aquarium seemed a gallery, with curious objects of great beauty hovering before our eyes—close, yet beyond our reach, like jewels in display cases.

Today's aquaria, however, are far more than repositories of living exotica. More and more, they are environmental interpretation centers focusing on the vast and largely inaccessible biological communities of the oceans and other aquatic habitats. New designs and displays are creating experiences that are far more successful in evoking a sense of the complexity of aquatic systems, realistically depicting aquatic landscapes, and—as attested to by growing throngs of visitors—are increasingly entertaining. Aquaria, until recently viewed as expensive frills, are now seen as a way to draw local residents and tourists into areas where traditional fishing and shipping economies have declined.

The success of some of the newer facilities—both as visitor-pleasing exhibitions and as hubs for local economic revitalization—has led to an unprecedented boom in the planning and building of aquaria throughout the country, particularly in cities near harbors and rivers.

Traditional “black box” aquaria have been established in several cities for years. Housing collections of strange, beautiful fish and invertebrates from around the world, San Francisco's Steinhart Aquarium, New York's Coney Island Aquarium, the Shedd Aquarium in Chicago, and Vancouver's Public Aquarium typify this model. Although these institutions have modernized their exhibits, their basic structure—long hallways opening onto rectilinear display areas—remains the same. In recent years, more advanced facilities have opened in Boston, Baltimore, Seattle, and Monterey. Boston's New England Aquarium (opened 1970) and the National

Aquarium in Baltimore (opened 1982) both continue to exhibit fish from around the world, but have been designed to convey specific ecological concepts: the movement of water from an inland pond through tidal marshes to the open sea; the adaptations necessary for survival in such diverse habitats as a North Sea cliff face and a South Pacific coral atoll; or the link between equatorial precipitation and the overwhelming diversity of a Brazilian rain forest (a terrestrial environment defined largely by the water flowing through, over, and under it).

Seattle's waterfront aquarium (opened 1976) concentrates on the inhabitants of the Puget Sound area, each displayed in its appropriate habitat. Such a regional approach was developed on a grand scale at the Monterey Bay Aquarium (opened 1984), which has received international acclaim and continues to attract more visitors than had been predicted: 2.3 million the first year and considerably more than a million each subsequent year (See Spring 1985 *Waterfront Age*).

In these new aquaria, the static exhibit techniques of the past have been replaced by innovations that allow visitors to "enter" the aquatic realm, becoming more intimately involved with the re-created habitats on the other side of the glass. Seattle's underwater dome places visitors in the center of a large community tank, surrounded on all sides and above by swimming inhabitants of the Pacific Northwest. In Orlando's Sea World, an acrylic tube runs through a huge shark tank, transporting enthralled viewers past an impressive number of the ocean's most notorious predators. In Monterey, towering 18-foot bay windows invite—indeed seem to pull—visitors into a sun-streaked underwater kelp forest, swaying with the surge, alive with shimmering schools of fish. This almost hypnotic experience is about as close as one can come, without donning a wetsuit, to being immersed in the ocean.

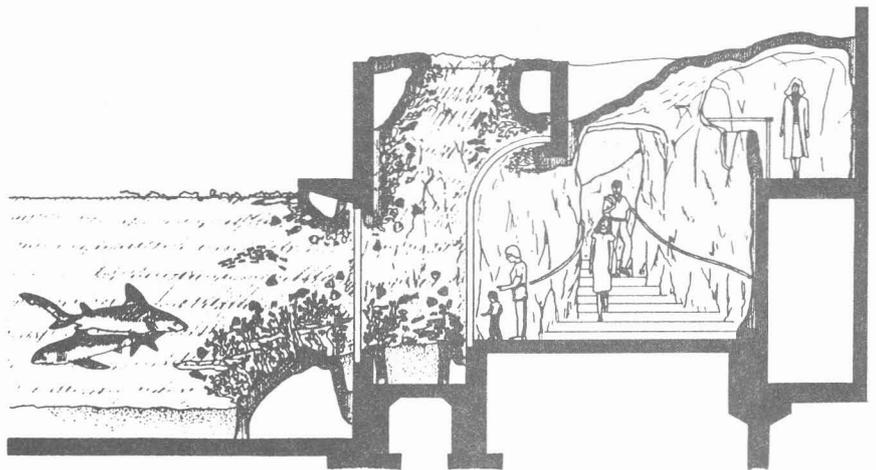
Contemporary aquarium designers have created theatrical lighting schemes, fiber-

glass/concrete replications of rock faces and coral reefs, and improved filtration and water-conditioning systems. They have also advanced in understanding relationships between tank configuration and animal behavior. With wave machines, hand-operated microscopic video cameras, and other high-tech features, they have brought new dimensions to many of the displays.

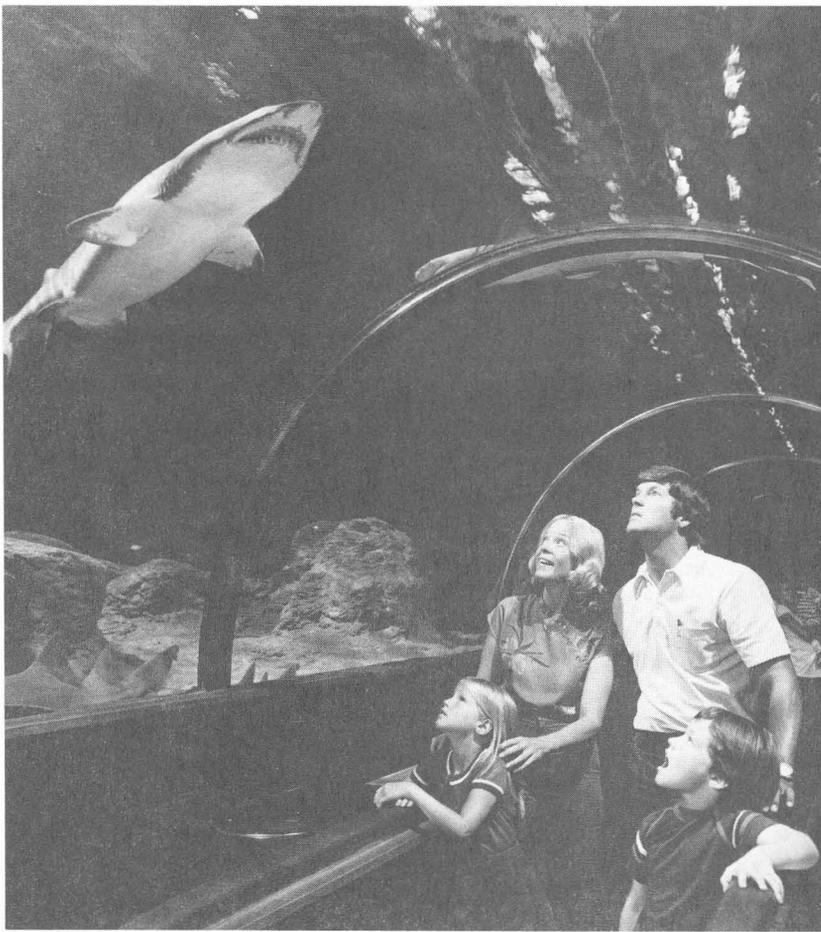
Recognizing the tourist-attracting potential of well-designed aquatic exhibitions, public and private groups in Charleston; Chattanooga; Corpus Christi; Denver; Detroit; Hawaii; New Orleans; Newport Bay and Portland, Oregon; Santa Monica; San Francisco (Pier 39); Western Florida; and even London are all actively seeking funds for new aquarium projects. This interest is impressive, given the enormous costs entailed: estimates range between \$20 million and \$60 million for most. Monterey's aquarium, funded entirely by the David and Lucile Packard Foundation, cost \$40 million. Financing schemes vary, but generally involve a combination of public funds, individual and corporate donations, and foundation grants.

Several of the planned aquaria are based on some variation of the regional concept popularized in Monterey. Since not many

The coral reef display at Tacoma's Point Defiance Zoo & Aquarium, now under construction, creates an illusion of depth and size through a combination of physically separate yet visually contiguous tanks.

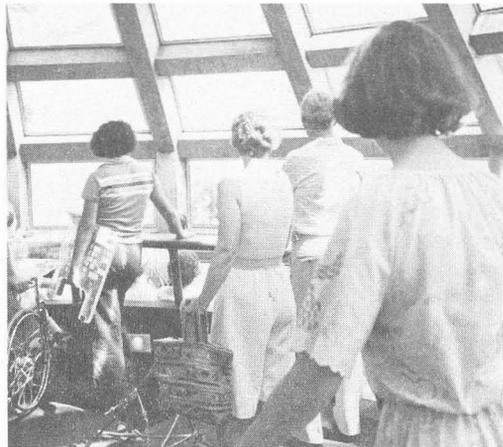


LEE C. EHMKE, FROM A DRAWING COURTESY OF THE PORTICO GROUP, SEATTLE, WASHINGTON.



COURTESY SEA WORLD

The "shark experience" at Sea World in Orlando, Florida.



COURTESY SEATTLE AQUARIUM

Underwater dome at the Seattle Aquarium.

areas are blessed with as rich a biotic community as Monterey Bay, other aquarium planners are looking to broader conceptual formats. The concept plan for the Denver Aquarium extends from Colorado's Continental Divide watershed southeast to the Caribbean and southwest to the Sea of Cortez. Clearly, coral reefs hold more fascination than trout streams. Tacoma's Point Defiance Zoo and Aquarium is being revamped with the Pacific Rim as an organizing theme. It provides underwater viewing of polar bears

and will soon include a tropical reef walk, illustrating the great variety of life unified by the waters of the Pacific. In New Orleans, voters recently approved a \$40 million bond issue that will fund an "Aquarium of the Americas," where visitors will move from the familiar realm of the Mississippi River to such far-flung locations as the Galapagos and the Bering Strait.

A regional focus, which encourages appreciation for resources many residents and visitors do not even know exist, is also increasingly popular in the development of small localized interpretive centers—"living museums"—where the natural processes of marshes, swamps, and other biological communities are explored. The Chula Vista Wetland Museum (opened in June 1987) and the planned Audubon Living Museum in the Ballona wetlands will provide Southern California's burgeoning population with opportunities to study the workings of a wetland, and will demonstrate efforts to protect and restore remnants of this critically important habitat. Both facilities will incorporate living aquatic exhibits as a complement to graphic, mechanical, and audio-visual interpretive elements.

In a somewhat surreal aquarium scene in the 1948 classic "The Lady from Shanghai," long sinewy forms of sharks and moray eels cast menacing shadows as Orson Welles prowled the halls. Aquaria have moved a long way from those murky depths: the vibrant, sunlit Amazonian rain forest crowning the National Aquarium palpably demonstrates the inseparability of terrestrial and aquatic environments. We live on a water planet, where life has moved continually between wet and dry media. This interconnection is revealed and celebrated in increasingly imaginative ways by the new aquaria. □

Lee C. Ehmke is an attorney currently enrolled in U.C. Berkeley's landscape architecture master's program and an intern for the Conservancy's Enhancement Program.

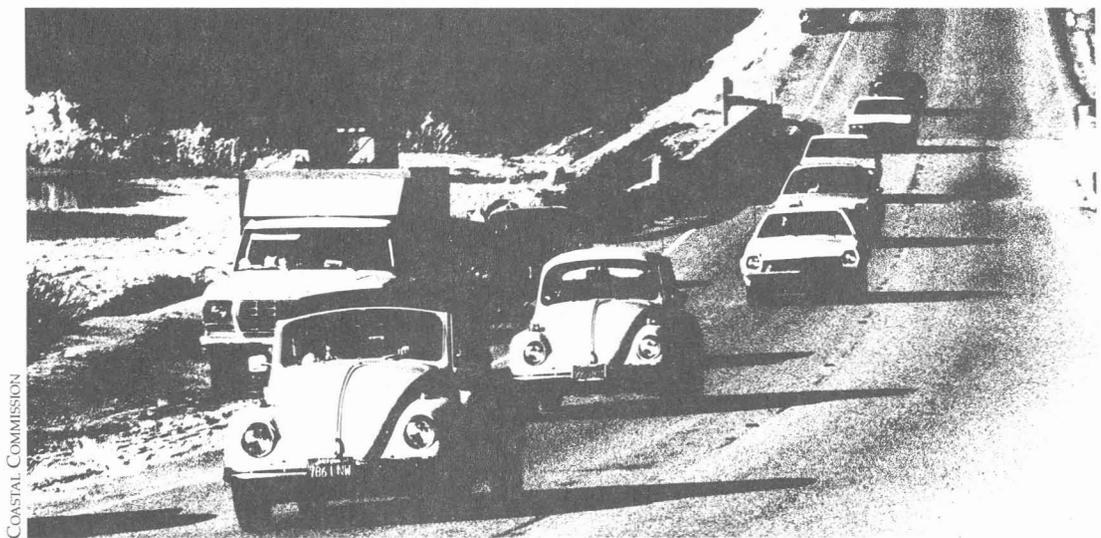
The Huntington Wetlands

Pickleweed or Parking Lot?

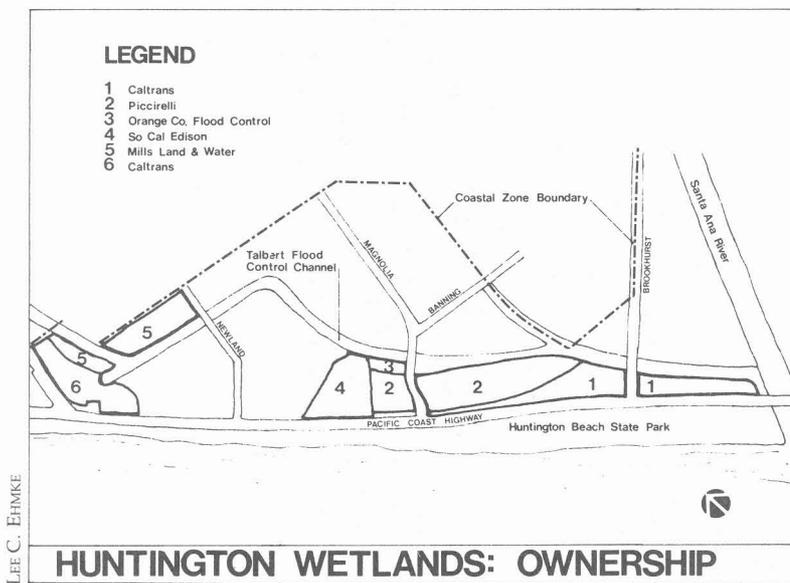
by Wendy Eliot and Reed Holderman

UNTIL THE CALIFORNIA Coastal Act of 1976 went into effect, the wetlands next to Huntington State Beach in Orange County were a cheap parking alternative to the \$3-a-day lots on the other side of Highway 1. Deceptively dry during the beach season, they would mire surfers and station wagons in the winter. A handful of environmentalists and agencies considered them important, but to property owners they were degraded building sites—potentially highly profitable, but presenting a development challenge.

The challenge was not excessive, compared to what predecessors had confronted. By the early 1970s, they had improved more than 2,000 acres of twisting sloughs and stinking, mosquito-infested mudflats. They had achieved a transformation by filling, draining, channeling, and developing. By 1975, only this 147-acre fragment remained of the formerly vast salt marsh that had impeded easy access to the shore by Orange County residents. This swampy patch of pickleweed and cordgrass was shielded by



COASTAL COMMISSION



LEE C. EHMKE

Ownership of the Huntington Wetlands is divided among public and private owners

levees from ocean tides and Santa Ana River flows, and surrounded by the Pacific Coast Highway, downtown Huntington Beach, suburban homes, and the Talbert Valley Flood Control Channel. In its midst squatted the Southern California Edison power plant, an immense tangle of dusty green pipes and towers. Next to it was one of the state's most popular oceanfront playgrounds and the home of the world surfing championship. Anyone with half an eye for real estate could recognize the investment potential.

Not surprisingly, the city of Huntington Beach drew up a plan to replace bugs, birds, and weeds with hotels, shopping centers, houses, and oil wells. In 1979, it submitted this plan to the California Coastal Commission, with the enthusiastic backing of property owners. But the Coastal Commission was the creature of another vision, the one expressed in Proposition 20, the 1972 ballot initiative that mandated that coastal resources be protected and all remaining coastal wetlands be preserved. In Orange County, only four significant wetland areas were left, and those in Huntington Beach were among them. The Coastal Commission rejected the city's land use plan.

The city was taken aback: its hope for a bustling waterfront was quashed because of this dried out scrubland. The property owners were irate: their expectations had sunk

into the muck of a bureaucratic decision. But the Coastal Commission, backed by resource protection agencies and environmentalists, was adamant: not a square foot of the Huntington wetlands could be filled. The city resubmitted its plan, contending that the site was not a wetland. But again the Commission said no. The stage was set for a long and dirty conflict.

At this point the city approached the Coastal Conservancy with a request for an urban waterfront grant, explaining it wanted to resolve some of the outstanding issues of its plan. The Conservancy looked at what the city had in mind and was not sure a grant would help solve the city's problem, because the city remained committed to the wetlands' development. However, after some discussion, an agreement was reached whereby the Conservancy agreed to help work out a resolution to the conflict that was preventing the city from completing its land use plan. Two years later, the Huntington Beach City Council and the Coastal Commission approved a land use plan that protects the entire wetland remnant. How the city came to accept a stance that was diametrically opposite to the one it originally held, and how the Coastal Conservancy and a group of dedicated local citizens provided a way to resolve the conflict, is a story that may be of value in other land disputes where environmental values are pitted against powerful development pressures, and the financial stakes are exceedingly high.

Scrubland or Wetland?

At first, the challenge of resolving the conflict while saving the wetland seemed overwhelming. The five property owners were unmoved by the Coastal Commission's argument that two endangered shorebird species had superior claim on land to which they held title. The city was in a quandary. The Coastal Act, in declaring all wetlands off-limits for development, had drastically affected their market value, but not the owners' ex-

pectations. These owners were unable to accept that their property was not a prime development opportunity worth \$1 million an acre, but a coastal marsh worth about \$6,000 an acre. The city was naturally uncomfortable about simply stripping away the owners' expectations, with no compensation. Yet that was what the Coastal Commission was asking it to do.

The city's central concern was the threat of condemnation suits from landowners if it zoned their land as a wetland, accepting that designation by the state Department of Fish and Game. To avert such litigation, it drew up a compromise that, in essence, would have allowed development of half the wetland, while protecting and restoring the rest. Development rights would be transferred from the south end to the north. But this would not have met the Coastal Commission's demand that the entire wetland be protected.

On February 28, 1985, at a meeting with city staff and City Councilman Peter Green, Coastal Conservancy staff proposed a concept that they believed would allow all parties in the dispute to come out with reasonable returns and, at the same time, protect the entire wetland. This concept included preserving and enhancing most of the wetland, using one of the properties as a mitigation site for three public works projects, swapping properties to settle lawsuits against the state, talking to the remaining property owners about possible public acquisition, and assisting the city in preparing its coastal land use plan.

The response was largely negative. The city was unwilling to relinquish development or to accept that the marsh was a wetland. Conservancy staff responded by agreeing to review the Fish and Game wetland determination and to meet with affected property owners. A local citizens group, Friends of Huntington Beach Wetlands, also took part in the discussion, advocating enhancement of the wetlands. After considerable debate, the city reluctantly agreed to this arrange-

ment. The urban waterfront grant request was shelved.

We then reviewed the situation. The major goals of completing the city's land use plan and wetland conservation could only be met if the Coastal Conservancy could provide land use solutions that protected and restored the wetlands, but did not deprive landowners of the economic return they expected from their property. The city needed to know conclusively that the wetland definition would stand. It would agree to preservation of the marsh only if most of the property owners agreed in principle to our proposals.

After the February meeting, we decided to pursue three separate facets of the problem:

- Prepare a comprehensive literature search and conduct an on-site survey of the wetlands to establish wetland boundaries.
- Survey the political and community scene.
- Ascertain property ownership and develop a strategy for compensating landowners without sacrificing any of the wetland.

Encouragement came from the City Council, which met and identified 18 objectives for the Conservancy to consider. By so doing, it showed itself willing to participate in the approach we had proposed. Three of the seven members openly favored protection for the Huntington wetlands.

Crafting a New Plan

On July 31, 1985, five months after Conservancy staff first met with the City Council and city planning staff, we reported the results of efforts thus far. We had confirmed the findings Fish and Game had made twice previously: the site included 147 acres of wetlands. Our objective now was either to gain the property owners' support for wetland preservation or, if that was impossible, to offer them economic alternatives to filling and development. We had investigated several restoration options, tailored to the specific



CAROL ARNOLD

**Brookhurst Ave.
restoration site.**

situation of each of the five property owners. These included acquisition, transfer of development rights, density bonus credits, and development adjacent to the wetlands.

The 147 wetland acres are in both public and private ownership, and this fact complicated and restricted the options for resolving the City/Coastal Commission impasse. Two public agencies owned a total of 69 acres, while 78 acres were privately held, with title variously encumbered.

For the California Department of Transportation (Caltrans), with 65 acres, and the Orange County Flood Control Agency, with 4, the solution was fairly straightforward. Both agencies had already proposed major public works projects that would affect the wetlands, but were not sure how to mitigate their impacts, as both federal and state law required. Since we had experience with wetland mitigation, and good relations with resource and regulatory agencies, we offered to put together a mitigation package for their projects. In exchange, we asked Caltrans to sell us its property, south of Brookhurst Street, and the County and Caltrans to help pay for an enhancement project and to work with a local land trust, the Huntington Beach Wetlands Conservancy, to realize it. Because our offer put the burden of working out the restoration plan and mitigation details on us and the land trust, Caltrans and the county were delighted to agree.

Southern California Edison Company was noncommittal about our proposals to acquire, lease, or option the 14 acres of which it was sole owner. It had been trying in vain to expand its power plant and knew this expansion would have to stay on hold until the Huntington Beach City Council and the Coastal Commission agreed on appropriate land uses for the area. The response to our approach was wait-and-see.

Our report on the 45 acres owned by Daisy Piccirelli, however, was not encouraging. Piccirelli lives in Mesa, Arizona. She had almost lost her property in 1982 because of delinquent taxes, and had sold an option and a lease to prevent foreclosure. The option holder, Bitter Water Lake Properties, had reserved the right to buy the property at \$250,000 to \$400,000 an acre. This arrangement prevented the Conservancy from offering to purchase Piccirelli's land outright.

Bitter Water, a group of attorney/investors, proposed developing half of Piccirelli's land for condominiums and dedicating the rest. Conservancy staff explained that the Coastal Act forbade filling wetlands, but agreed to present their proposal to Coastal Commission, Fish and Game, and city staff to get their reaction. None felt the investor group was entitled to develop the wetlands because it had purchased the option as a speculative venture in 1982, long after the property had been designated a wetland. Bitter Water's response to us was: What's more important, birds or housing for people? If the state wants a lawsuit, it is going to get one.

In addition to meeting with Bitter Water, Conservancy staff member Wendy Eliot met with Piccirelli, who said she wanted millions of dollars for her property and had no interest in having an appraisal done to determine fair market value. She said she already knew what her land was worth.

In a subsequent letter to President Reagan, with copies to Gov. George Deukmejian, the Coastal Conservancy, and others, Piccirelli explained how she viewed the situation. Government agencies had taken 65

acres of the land she had owned in Huntington Beach since 1946, for a Southern California Edison plant and a possible highway widening project, and had paid "very little." Then the Coastal Commission had prevented her from selling the rest at the price she expected. Now she was being offered a price that was an "absolute joke" on the basis that her land was a wetland. She acknowledged that wetlands are important, but pointed out that those who had developed 90 percent of them already had "made tremendous profits." She was convinced that "the California Coastal Act, the Coastal Commission, and the Coastal Conservancy are trying to steal my land from me."

The other private owner, who held 19 acres, had as little interest in what we had to offer as Piccirelli did. Mills Land and Water Company is owned by Robert London Moore Jr. and other shareholders whose families acquired the property in 1901. The firm had been anxious to develop its land for years, but had been prevented by the Coastal Commission's denial of the city's land use plans. In response, Mills sued the Commission, challenging its authority to deny plans because of the existence of wetlands. This suit is still pending.

Mills had also sued Caltrans in an effort to repurchase over 28 acres condemned for a freeway that was never built. The State Legislature had tried to resolve this lawsuit by directing Caltrans to sell the land back to Mills, if it could obtain the necessary approvals to develop the property. Mills had been unable to secure these approvals because all but seven of these acres were designated wetlands by Fish and Game. To avoid litigation, Caltrans had renewed Mills' option annually since 1977.

To settle the Caltrans-Coastal Commission-Mills dispute, Coastal Conservancy staff proposed a three-way deal. Caltrans would sell the 7 non-wetland acres back to Mills, and sell the rest to the Conservancy. Mills would drop both lawsuits. The Conservancy would help Mills to obtain devel-

opment permits for the seven developable acres. Since Conservancy staff had already proposed a 180-room hotel on this property, based on a detailed economic analysis, and had discussed that idea with city and Coastal Commission staff, we were confident that a hotel would work on this site and would allow Mills to make a huge profit.

But Moore's response to numerous telephone calls and repeated attempts to meet with him was: "We are not interested. Your people (Conservancy staff) put this (proposal) together without consulting us." He thought it "difficult not to envision commercial development on this property. . . . If someone is serious about wetland restoration, they should condemn the property and pay Mills fair market value."

The problem lay in vastly different interpretations of what, in this case, constituted fair market value. Conservancy staff relied on appraisals of Southern California wetlands, which could be enhanced or restored but not developed, and which ran between \$6,000 and \$10,000 an acre. Moore, like Piccirelli, relied on estimates of land values for residential or commercial development,

Typical summer weekend at Huntington Beach. Southern California Edison plant stands in the wetland.



COURTESY SURFER MAGAZINE

which ran from \$300,000 to over \$1 million an acre.

Thus, the Conservancy staff presentation to the Huntington Beach City Council on July 31 showed that the public owners and one private owner (Southern California Edison) would probably cooperate in a land use plan that would protect the Huntington wetlands, but that two private owners were, so far, intractable. We concluded with one recommendation: that the city prepare another land use plan for the wetlands, clarifying allowable uses. As long as the city continued to challenge the wetland designation, landowners would assume that their wetlands were developable.

The Battle Is Joined

The draft plan, released on February 21, 1986, was no solution. It presented three alternatives: wetland protection, full build-out, and a compromise similar to what the city had originally proposed. City staff selected the compromise alternative as its land use recommendation to the Planning Commission.

Swift and intense opposition came from two directions. The Friends of Huntington Beach Wetlands led the assault, pointing out that under law, none of the wetlands could be sacrificed. The Friends, a community

group, had been playing an increasingly active role in rallying local support for the wetlands. Piccirelli, Mills, and the option/lease holders also opposed a compromise, urging the city to adopt the full build-out alternative.

Both forces converged in a dramatic City Planning Commission hearing on May 6, which filled the Council chambers to capacity. During four hours of testimony, those favoring wetland protection outnumbered those seeking development 20 to 1. One witness, who had been watching the hearing on cable TV, caught the spirit of the moment when she told commissioners she had left her dinner and children to drive down and voice her hurried support for the marsh and for her neighbors. The pro-development forces' main argument was that the wetlands were not really wetlands, and that those who said otherwise were overzealous "wetland weepers."

The Planning Commission, which included pro-development members such as John Erskine, executive director of the Orange County Builders Association, voted 7 to 0 to designate the entire area as wetlands, going beyond the most stringent alternative presented by city staff.

A month later, on June 2, 1986, the City Council met before the largest crowd in its history to consider a unanimous Planning Commission recommendation for wetland

Southern California steam generating plant. Adjoining wetland at right bottom.



SURFER MAGAZINE

protection and a city staff recommendation for a mixture of development and wetland enhancement. At least 500 people jammed City Hall. Hundreds were directed to a room where they watched the proceedings on television. The Friends of Huntington Beach Wetlands had again marshaled tremendous support, confronting property owners, who repeated previous arguments and legal threats in their effort to convince the Council that its only practical alternative was to fill and develop the wetlands. After four hours of testimony, the Council voted 5 to 2 for full protection. Many in the audience leaped to their feet and applauded for several minutes.

Now the city could submit an acceptable land use plan to the Coastal Commission. The Huntington wetlands and one property in the Bolsa Chica wetlands were the only remaining non-certified coastal segments in Huntington Beach. But city staff seemed less than eager to finish the necessary paperwork, and wanted to delay the submittal until after the November Council elections. Mayor Robert Mandic and Councilmembers Peter Green, Ruth Finley, and Ruth Bailey, however, prevailed on City Administrator Charles Thompson to expedite the process, and eventually the message was heard.

The end of this dramatic and controversial planning process came quietly on October 8, when the Coastal Commission held a hearing on the Huntington Beach Land Use Plan in Los Angeles. Moore and others spoke against the plan and asked the Commission to postpone a decision until after the election. Mayor Mandic and Jim Palin, Huntington Beach community development director, supported the wetland plan, as did Gary Gorman and Gordon Smith from the Friends of Huntington Beach Wetlands. Gorman summed up the pro-wetland sentiment when he told the Commission that "not only did the city support the plan, but three of the five property owners [Caltrans, the Flood Control Agency, and Southern California Edison], constituting 50 percent of the wetlands, favored the city's plan as well." The Commission took two minutes to decide, voting 10 to 1 in favor of the city's plan, bringing to a close ten years of frustration for resource and regulatory agencies. At long last, one of Southern California's last remaining significant wetlands was protected.

The Picture from Another Angle

Two major movements—the quintessence of strange political bedfellows—created favorable conditions for the Conservancy's work in Huntington Beach.

One was the local citizens movement for wetland protection, which reversed a trend of some years' standing. It generated the Friends of Huntington Beach Wetlands, modeled on and learning from the Amigos de Bolsa Chica at the other end of town. It also succeeded, in 1984, in electing an environmental activist to the City Council and tipping the Council's balance away from continuous development and toward protecting the natural environment.

The other was the movement to improve the development-serving infrastructure of the area through a series of federal, state, county, and city public works projects. Huntington Beach wetlands have them all. In fact, the disputed land area is more or less surrounded. Along the southern edge, the state plans to widen Pacific Coast Highway. To the east, federal authorities will widen the Santa Ana River flood control project. To the north, the County Flood Control District will widen the Talbert Channel. And along Brookhurst, the city will widen the street and provide a new and wider bridge.

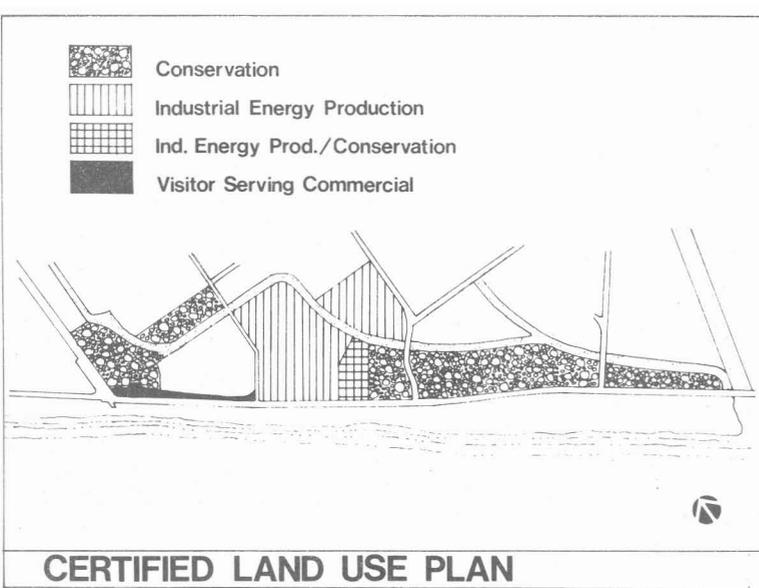
All these projects enjoy considerable public support, even among the most dedicated and hard-line environmentalists. All these projects also, under federal and state laws, require mitigation. That is, for every patch of significant natural environment they destroy or alter, another patch must be restored. Patches to restore are getting scarcer, housing tract by housing tract.

In addition, each of these projects would affect and be affected by the others, and each was on a totally separate timetable. None of the agencies could start its mitigation program without knowing what the others would do. And, of course, none of the others could give a definitive answer.

Enter the Conservancy. Its studies and recommendations, you will notice, were designed to help the public works agencies out of their pickle, thus eliciting important support from these agencies and from some members of the City Council and the community who aren't crazy about wetlands but are even less enamored of flooded houses and severe traffic congestion. The recommendations had the added virtue of offering to meet the reasonable needs of property owners (although there has been significant disagreement about what is "reasonable"), capitalizing on the energy of local citizen organizations, and allowing the city to comply with state and federal environmental laws.

—Ruth Galanter

Formerly a consultant to state conservation agencies and local governments, Ruth Galanter was recently elected to the Los Angeles City Council.



The coastal land use plan of the city of Huntington Beach was approved by the Coastal Commission on October 8, 1986, and provides protection for 147 acres of wetland.

Epilogue

Within the past year, the Coastal Conservancy has acquired 15.22 acres from Caltrans and funded a wetland enhancement project, managed by the Huntington Beach Wetland Conservancy in cooperation with Caltrans and the Orange County Flood Control Agency on 23.2 acres. The project will restore tidal action, include the planting of salt marsh plants, provide public access, and remove the seaward levee of the Talbert Valley Flood Control Channel to increase flood protection during major storms. The project will also provide to Caltrans (and possibly to the county) legally required mitigation of damages to wetlands caused by a widening of Pacific Coast Highway, the construction of a new bridge over the Santa Ana River, and the creation of a new ocean outlet for and widening of the Talbert Valley Flood Control Channel. As a result of this mitigation, these long-delayed projects can proceed.

As to the other properties, nothing much has changed. Bitter Water Lake Properties recently sold its option on the Piccirelli property to Mola Development Corporation for an undisclosed amount. Southern California Edison has been discussing some possible enhancement options with the Coastal Conservancy, but no decision has been made on which, if any, of these options the utility will pursue. Mills is still intent on reacquiring the acreage Caltrans acquired by condemnation in 1965. The Conservancy funded a market financial study by Laventhol & Horwath and prepared a preliminary site plan in an effort to convince Moore that the original proposal for a hotel on non-wetland acreage is still a

great deal if Mills drops its lawsuits and sells the adjoining wetlands for enhancement. But Moore has shown no interest so far. The proposal "doesn't pencil out," he said recently.

What will happen to this land in the future? It's anyone's guess, but the Conservancy remains committed to finding a way to place wetlands into public ownership and to working out an equitable solution for the remaining private owners.

Lessons

The Conservancy was instrumental in resolving the Huntington wetlands dispute for the City Council and in helping the city complete its wetlands land use plan by brokering agreements and gaining the support of regulatory agencies, and by providing reasonable offers to landowners. Along the way, we learned a few lessons that may be useful to others.

- Wetlands can be preserved, even in the face of severe development pressures, if landowners are provided with realistic economic opportunities as part of a wetland enhancement plan.
- Realistic incentives for preservation can be developed, and can find support with regulatory and resource agencies. In the development of these incentives, it is essential to consider the physical constraints of the site, restrictions on development, and the nature of land ownership.
- Participation of landowners in the proposed solution is helpful in providing a program that local governments and regulatory agencies view as reasonable.
- Close coordination between all parties is necessary for understanding differences and creating a climate conducive to resolving these differences.
- Some landowners will not be persuaded to sell, even when the offer made to them appears eminently reasonable to others.
- Local citizens advocating wetland preservation can achieve what sometimes seems unlikely or even impossible. □

Wendy Eliot and Reed Holderman are project managers for the Conservancy's Resource Enhancement Program. We acknowledge the key role played by Ruth Galanter, who was the State Coastal Conservancy's consultant on this project.

A Neighbor In Need

Gary Gorman says that three years ago he did not know a wetland from a dryland or a pelican from a tern. He commuted from his home in a housing tract in Huntington Beach to his job as a firefighter in Long Beach and "was like most people, concerned mostly with the 150 square feet where we stand. I had no understanding of how important wildlife is or why it becomes extinct." All that changed after he discovered that the scruffy land by his house was really a valuable marsh.

Gorman lives with his wife and two children in one of 142 homes that stand east of the Pacific Coast Highway, separated from it by a chain-link fence and a flood control channel. For the first half of the decade he has lived there, he was aware of the undeveloped land on the other side of the channel mainly as a nuisance, attracting beachgoers who often left piles of trash behind the houses.

"When we bought the house, the realtor said that land was a state preserve. But later, I went to City Hall and looked up the records and found some of it was privately owned." The land was so close to the highway, it was a likely site for development. Though he had not heard of any plans, visions of Miami Beach, with massive crowds, rose in his mind.

In fall 1984, he attended a campaign coffee given by a neighbor, Candice Brenner, for a City Council candidate, biologist Peter Green. Green was past president of the Amigos de Bolsa Chica, a citizens group working to protect a marsh across town. Perhaps the Amigos would take the land by the channel here under their wings, Gorman proposed. Green responded that the neighbors in Huntington Beach should form their own group.

When, some time later, Gorman learned that the state Department of

Fish and Game had declared that problematic land environmentally sensitive, he called a few neighbors together to discuss the possibility of forming their own group.

Among those who came were Candice Brenner, who teaches biology at Golden West College, and her husband, Gregory, technician for a local television station. Unlike Gorman, they had been well aware that a wetland existed behind their house.

"That was one of the reasons we moved out here in 1982," she said. "The first thing we built was a deck in the trees so that we could watch the birds. I like to go up there before the kids get up."

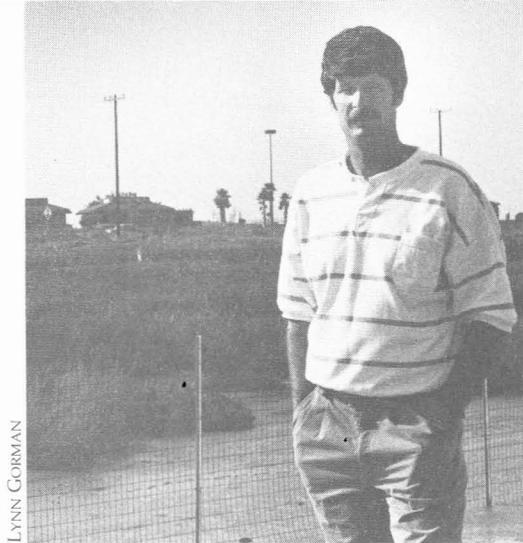
Thus began the group that in February 1985 organized as Friends of Huntington Beach Wetlands to preserve and restore the degraded marsh on which they lived. With some guidance from the Amigos de Bolsa Chica, the neighbors did some research, then called a public meeting in the nearby elementary school and sent word out by means of flyers to 2,000 homes. More than 100 people came, and 50 signed up as members.

"One of the first things we were able to do was get the area fenced," Gorman said.

The Friends also organized a clean-up. They started a newsletter, informing residents how they would be personally affected by various plans for the land. "The only real way you can motivate people is to show they will be or are being affected," Gorman said.

Eventually, the group grew to 110 members. But its influence was far wider, as was evidenced by the unprecedented crowd that gathered at the Planning Commission and City Council meeting, to secure the passage of the land use plan preserving the wetland.

Now, with the imminent threat to the marsh abated, the Friends have



LYNN GORMAN

Gary Gorman

stepped back into a watchdog role, ready to spring forward into action, with the support of national conservation organizations, if the occasion requires. But Gorman and some of the other members have taken on a new challenge. They have organized the Huntington Beach Wetlands Conservancy, the first nonprofit group ever to construct and manage a flood control project under contract with Orange County. The project will create 28 acres of marsh and incorporate flood control features.

Why did the county enter into this arrangement? "We will save the county \$3.5 million," explained Gorman. "The county had budgeted \$4.5 million to improve a flood control channel of 2,500 linear feet. We will deal with flood control and restore the marsh for about \$500,000. We will own and maintain and manage in perpetuity the whole wetland. There are lots of safety valves, though, if we disband. The county will have an easement for flood control purposes and will maintain facilities. Besides saving money, the county also gains mitigation credits that will be applicable on other aspects of its public works improvements in this area."

After the marsh is restored, biologists will monitor the expected return of birds, fish, and plants.

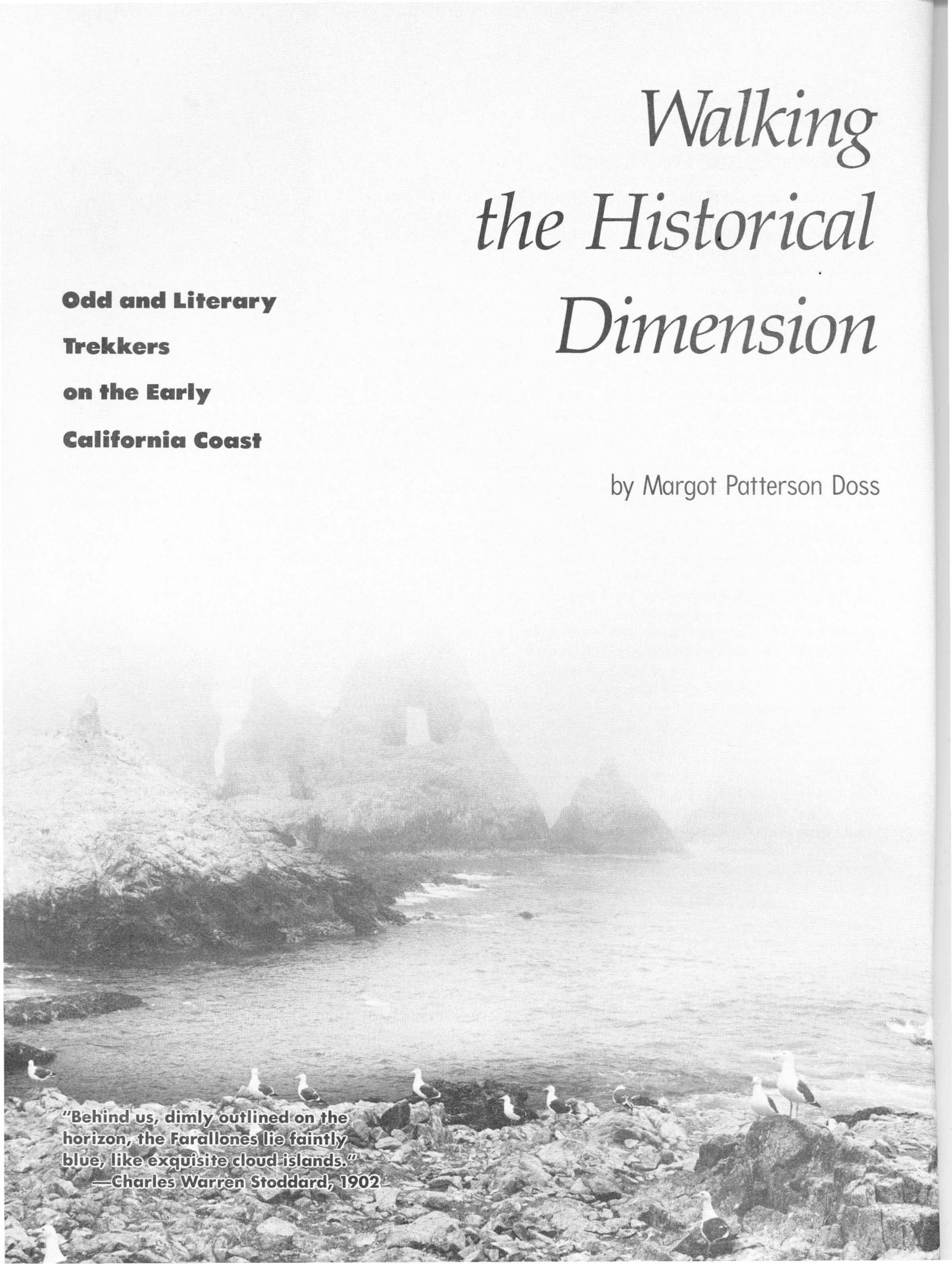
Eventually, the Friends of Huntington Wetlands hope to see much more than the first 28 acres come back as a healthy marsh, alive with the many species that historically flourished in this coastal wetland.

—R.G.

Walking the Historical Dimension

**Odd and Literary
Trekking
on the Early
California Coast**

by Margot Patterson Doss



"Behind us, dimly outlined on the horizon, the Farallones lie faintly blue, like exquisite cloud islands."

—Charles Warren Stoddard, 1902

HALF MOON BAY RANCH Bought As Open Space," the *San Francisco Chronicle* announced on October 16, 1987. "One of the most spectacular stretches of Bay Area coastline has been protected from future urban sprawl with the purchase yesterday of a 1,270-acre ranch." As the news story went on to detail this achievement by the Peninsula Open Space Trust, one sentence riveted my attention: "At the turn of the century it [the ranch] was the site of the tiny town of Purissima, which fell on bad times and disappeared from coastal maps." What could those bad times possibly have been?

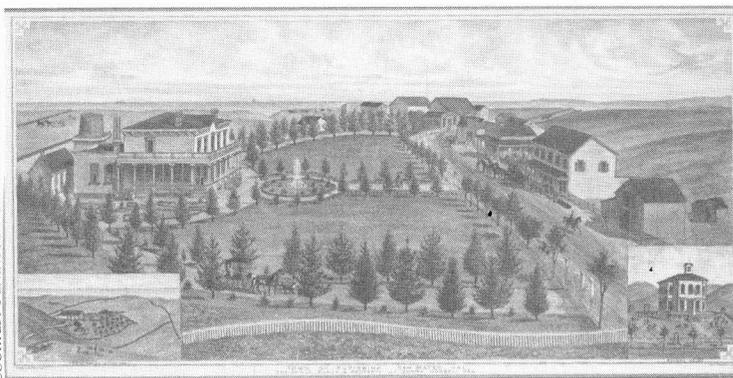
Only the night before, as it happened, I had come upon Purissima in a book, J. Smeaton Chase's 1913 classic, *California Coast Trails, A Horseback Adventure from Mexico to Oregon*, recently reissued by Tioga Publishing. I riffled through it again and there, on Page 239, thought I saw a clue:

Nearing Tunitas Creek, we were greeted by the screech of a locomotive, and I found that we were at the temporary terminus of the Ocean Shore Railroad, which comes down the coast thus far from San Francisco.

Then we passed a straggling settlement named Purísima [sic] the capital, so to speak, of a grant of land enjoying the lengthy title of Cañada Verde y Arroyo de la Purísima ["Green Valley and Canyon of the Immaculate Conception"]; and soon arrived at the town of Half Moon Bay. . . .

Next day . . . [w]e were early on the road, which rounded the head of the bay, passing through a number of newborn "cities" whose existence was to be known mainly by pitiful little cement sidewalks, already bulging and broken. Each place in succession adjured me by stentorian sign-boards not to miss the wealth that awaited investors in its "gilt-edged" lots.

COURTESY PENINSULA OPEN SPACE TRUST

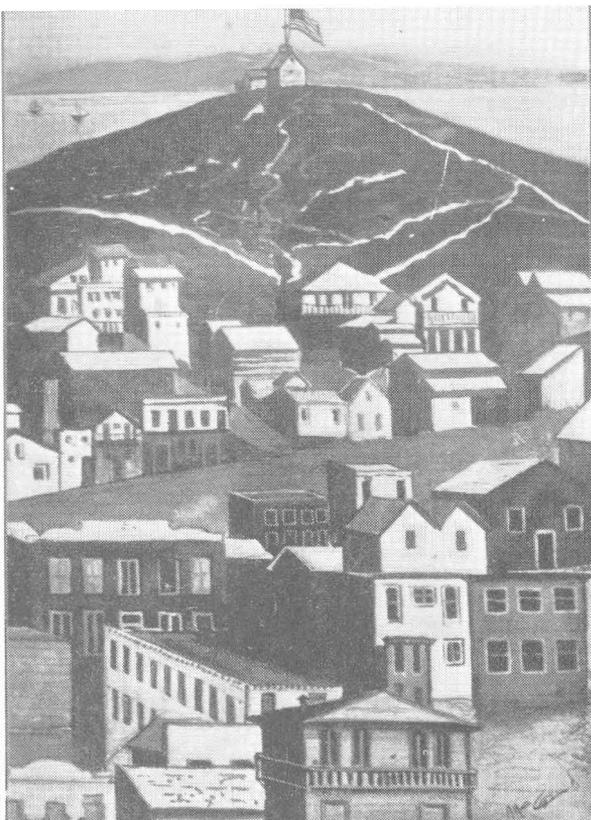


So here was the clue. The Ocean Shore Railroad, despite its slogan, "It Reaches the Beaches," never reached them all, precipitating first a real estate boom, then a bust. Many developer dreams crumbled along with newly laid sidewalks. Purissima could well have been one of these. Setting the question aside for further research, I regarded the book in hand. Its cover has a vignette woodcut of the author on horseback, bedroll snug at his saddle, beholding a Torrey pine.

Purissima in 1878.

California Coast Trails was first published 75 years ago, yet it remains an interesting guide for the modern traveler seeking to see the coast in its historical dimension. It belongs in the glove compartment, backpack, or—in the case of the armchair traveler—on the bookshelf next to three other early journalists' accounts: *Mountains and Molehills or Recollections of a Burnt Journal* by Frank Marryat, *Eldorado; or, Adventures in the Path of Empire* by Bayard Taylor, and *In the Footprints of the Padres* by Charles Warren Stoddard. A fifth volume to complete this reference library might be a new book, *San Francisco Bay Area Landmarks: Reflections of Four Centuries* by photographer Charles Kennard, which combines historical descriptions of places with photographs of these places now.

In his introduction to Chase's reissued volume, John McKinney, author of the hiking guide *California Coastal Trails*, writes: "On many a coast walk, I've packed a well-thumbed, hard-bound copy of Chase's book. So vivid is his evocation of the coast, circa 1911, that I began to hear his voice in the wilderness, began to see the trail through his



Telegraph Hill, 1856

eyes." To be sure, many of the trails Chase rode are now gone, as are some of the place names he mentions, and "roads now make the wilderness easier to reach and harder to know," writes McKinney. But we can explore both what we now have and what Chase found because, in the words of McKinney, "He left us a record . . . a book unequalled before or since as a description of the state's coastline."

Like many a modern traveler, Chase had a longing to see what was about to disappear or was already gone. The Panama Canal was then under construction, and he expected that it would bring much more population and commerce, which would obliterate "much of what is distinctly Western in life and manners."

He was a keen observer, a fine reporter, a man of simple tastes and refined perception. The urbanity of his journal calls to mind that earlier British coastal adventurer, Frank Marryat, whose *Mountains and Molehills*, reprinted some years ago in a facsimile edition by Stanford University Press, contains some of the most vivid descriptions of Gold Rush San Francisco. His tastes in travel were quite different from Chase's. At a time when men were pouring into the city bound for "the diggin's," he arrived with a servant, three bloodhounds, tents, his library, his wine cel-

"Above and beyond the school-house Telegraph Hill rose a hundred feet or more. Our street marked the snow-line, as it were; beyond it the Hill was not inhabited save by flocks of goats that browsed there all the year round."

**—Charles Warren Stoddard,
1902**

lar, a portable kitchen, and food. It was June 1850, during one of the fires common in early days.

"[W]e have arrived at the moment of the great June Fire of 1850, and San Francisco is again in ashes," he wrote.

. . . There is nothing particularly impressive in the scene, for although four hundred houses have been destroyed, they were but of wood, or thin sheet-iron, and the "devouring element" has made a clean sweep of everything, except a few brick chimneys and iron pots. . . Planks and lumber are already being carted in all directions, and so soon as the embers cool, the work of rebuilding will commence. . .

A year earlier, Bayard Taylor had recorded his first sight of the city in *Eldorado; or, Adventures in the Path of Empire*:

The barren side of the hill before us was covered with tents and canvas houses and nearly in front a large two-story building bore the sign "Fremont Family Hotel." As yet we were only in the Suburbs. Crossing the shoulder of the hill the view extended around the curve of the bay and hundreds of tents and houses appeared scattered over the heights and along the shore for more than a mile. On every side stood buildings of all kinds, begun or half finished, and the greater part mere canvas sheds open in front and covered with all kinds of signs in all languages. Great quantities of goods were piled in the open air for want of a place to store them in. The streets were full of people hurrying to and from and of as diverse

and bizarre a character as the houses—Yankees of every variety, native Californians in sarapes and sombreros, Chileans, Sonorans, Kanakas from Hawaii, Chinese with long pig-tails and Malays armed with creeses. We came at last to the Plaza, now dignified by the name of Portsmouth Square. From a high pole in front of a long one story building used as the Customs House, the American Flag was flying.

We can assume that Taylor's ship had put in at what is now Aquatic Park.

A fourth traveler and writer, Charles Warren Stoddard, was nine years old when he arrived, at about the same time as Marryat:

... And then at last, after a journey of nearly five thousand miles, we slowed up in a fog so dense it dripped from the scuppers of the ship; we heard the boom of the surf pounding upon the invisible shore, and the hoarse bark of a chorus of sea-lions, and were told we were at the threshold of the Golden Gate, and should enter it as soon as the fog lifted and made room for us.

At last the fog began to show signs of life and motion. Huge masses of opaque mist, that had shut us in like walls of alabaster were rent asunder and noiselessly rolled away. The change was magical. In a few moments we found ourselves under a cloudless sky, upon a sparkling sea, flooded with sunshine, and the Golden Gate wide open to give us welcome. ...

The scene is timeless.

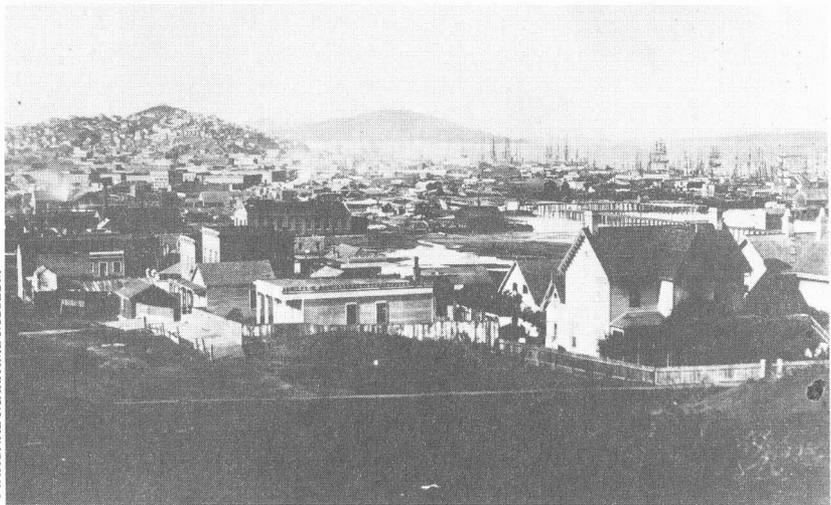
Thus, equipped with Chase, Marryat, Taylor, and Stoddard, today's explorers can

FROM ELDORADO



Portsmouth Square, 1849

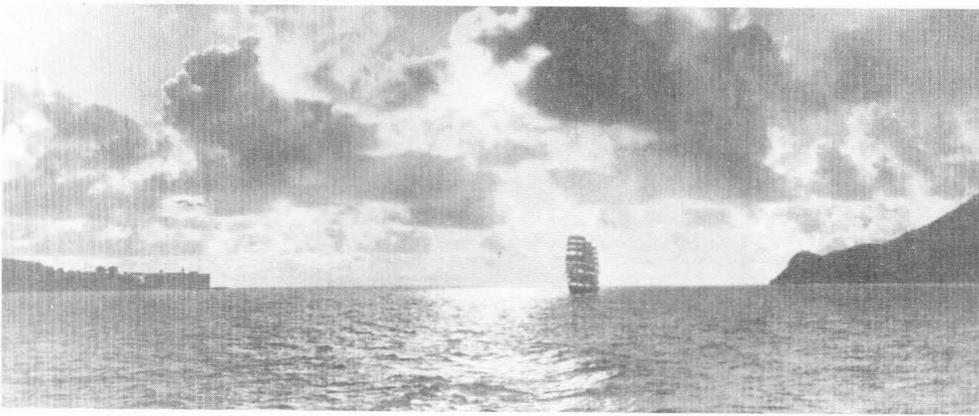
NATIONAL MARITIME MUSEUM



First and Harrison streets, 1856

"Walking through the town the next day, I was quite amazed to find a dozen persons busily employed in the street before the United States Hotel, digging up the earth with knives and crumbling it in their hands. They were actual gold-hunters, who obtained in this way about \$5 a day."

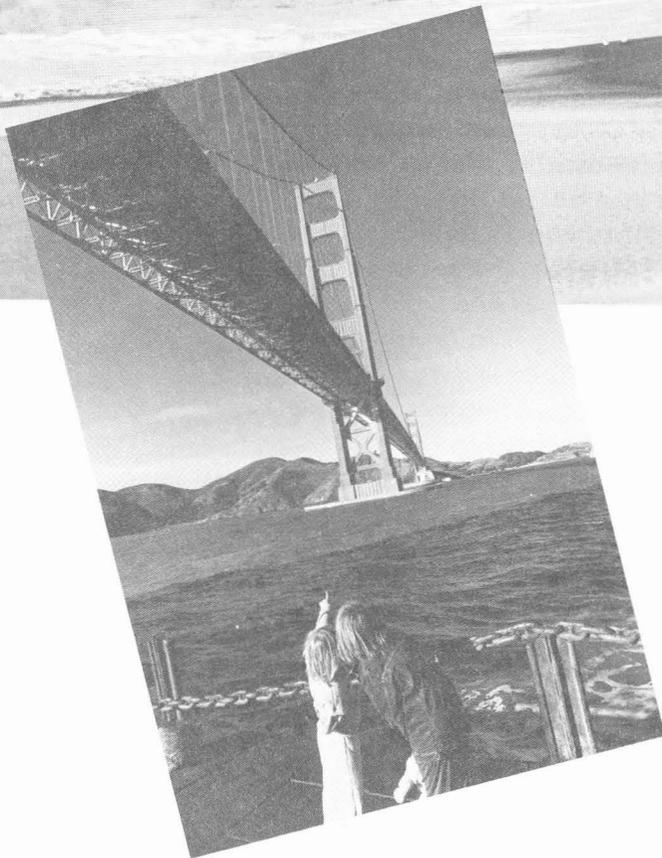
**—Bayard Taylor,
1849**



"At last we are through the Golden Gate—fit name for such a magnificent portal to the commerce of the Pacific!"
—Bayard Taylor, 1849

"Perhaps it is a mile wide, that Golden Gate; and it is more bronze than golden."

—Charles Warren Stoddard, 1982



JIM MILTON

revisit the coast of the past and thereby add to their understanding of its present. All four of these early journalists were great walkers. Anyone who has ever traveled with mules knows that most of the journey is made on foot. In rough terrain, a horse too often must be led. So there is no denying that both Marryat and Chase saw the coast they wrote about with a walker's intimacy on the path. Taylor was more forthright. One morning he simply set off to walk to Monterey. It took him three days. Today, we drive it in three hours. But it is only in his book that we see what Taylor saw—the strawberries on the hill slope, the fields of wildflowers—or smell the sea, or feel the wind on our faces. Certainly no one in our time has come upon coyotes devouring a dead seal on Ocean Beach, while turkey vultures lingered in the distance, awaiting the spoils.

The first of our coast walkers, were, of course, the native Indians. They unfortunately left no written records, so we must look to their orally transmitted legends, and to later chroniclers, including Jaime d'Angulo, whose best-known work, *Indian Tales*, is only one of many in which he tells of the lives and thoughts of the indigenous people he came to know. He lived on Big Sur, traveled the coast, and spoke the language of some of the people he visited. Theodora Kroeber's *Ishi in Two Worlds* documents coastal Indian life as well, and Malcolm Margolin's *The Ohlone Way* tells of life along San Francisco Bay before Europeans' arrival.

The earliest explorers left us their good impressions in Spanish (scholars read of the journeys of Gaspar de Portola y de Revira, Jose Francisco Maria de Ortega, Pedro Fages, Francisco Javier Ribera y Moncada, and Juan Bautista de Anza for information, rather than pleasure or perspective). Almost every early explorer who came by ship had a literate chaplain or botanist aboard to leave a written record—consider Francis Fletcher aboard Drake's Golden Hind, or Archibald Menzies, aboard Vancouver's ship. Like the botanists

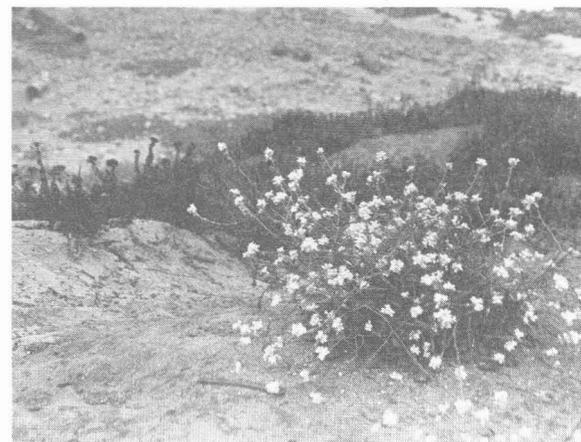
who followed them, such as Joseph LeConte, or geographers, such as George Brewer, they left valuable accounts, too. But for pleasurable reading, give me the professional keeper of a journal every time. One early favorite of mine is writer James Power, who walked from Georgia to Los Angeles, then came north along the coast as far as Sonoma County. His satire of a wine tasting en route could have been written yesterday. Lt. John Derby, who wrote under the name of John Phoenix, is equally amusing. Unfortunately, their books are out of print.

In our own time, coastal trekkers continue to explore the 1,000-mile shoreline, and many leave no records. Coach John "Ironlegs" Stahl walked from San Francisco to Seattle in 1962. At about the same time, I met a penitent who refused to tell me her name, insisting she wanted no publicity. She had walked as the Franciscan friars did, from mission to mission, beginning in San Diego and ending at Sonoma.

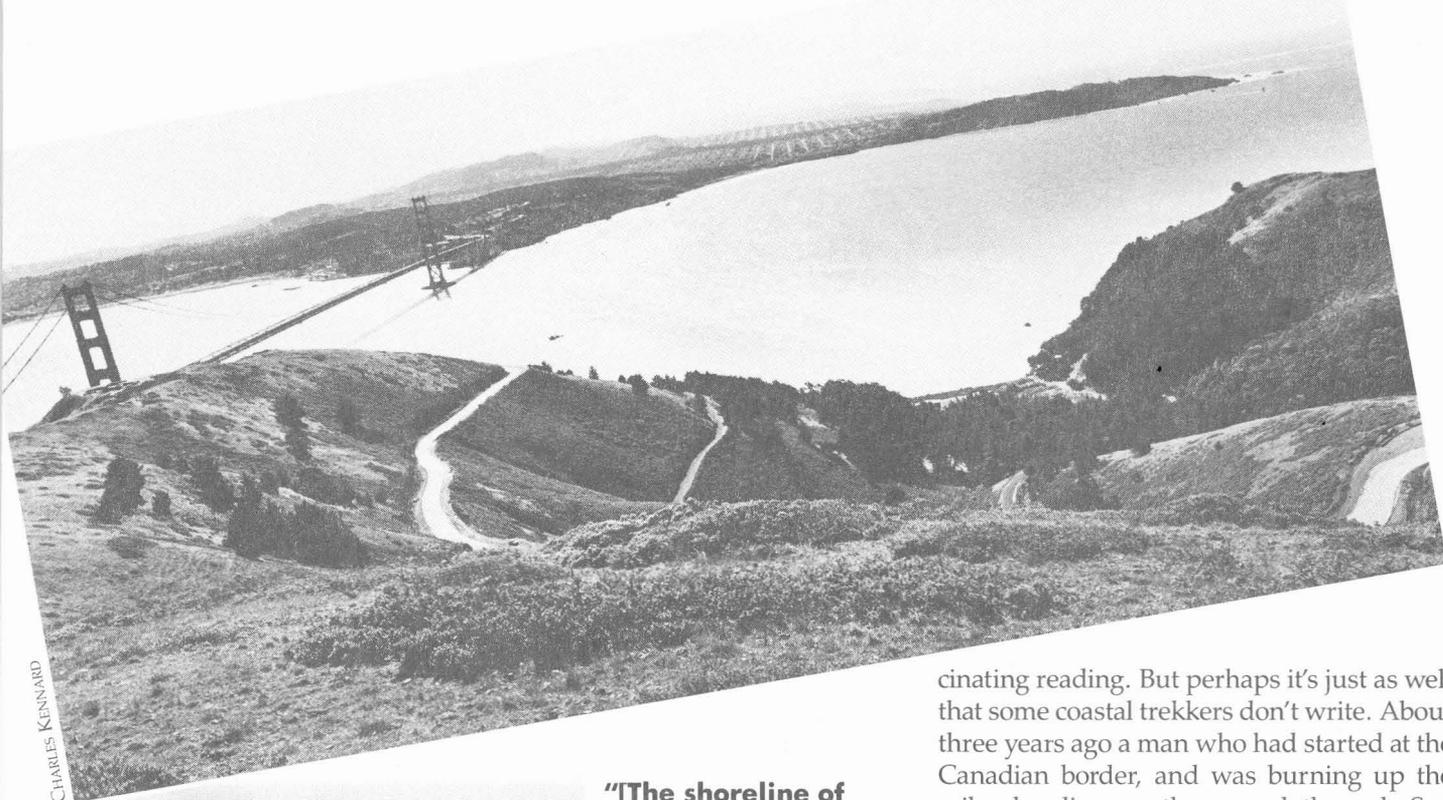
The most arduous of all pilgrimages, however, may have been that of Heng Sure and Heng Chau, two American Buddhist monks from the Gold Mountain Monastery in San Francisco, who walked from Los Angeles to the City of Ten Thousand Buddhas monastery in Talmadge, Mendocino County, while bowing—a full prostration—every three steps. Their 800-mile journey started on May 7, 1977, and lasted two-and-a-half years. Traveling mostly along the Coast Highway, they ate only one vegetarian meal a day and slept sitting upright, in lotus position, having taken a vow not to lie down. Heng Sure also observed a vow of silence.

The two monks' tale could have made fas-

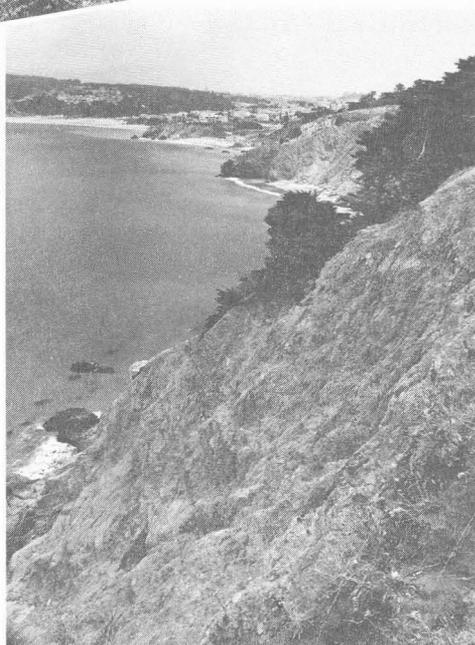
JIM MILTON



CHARLES KENNARD



CHARLES KENNARD



**"[The shoreline of San Francisco] is an exhilarating influence upon the people of the city, drawing their vision outward, opening their physical and mental horizons and infusing them with a sense of natural grandeur and a sense of adventure."
—Richard Reinhardt, 1971**

inating reading. But perhaps it's just as well that some coastal trekkers don't write. About three years ago a man who had started at the Canadian border, and was burning up the miles heading south, passed through San Francisco. I joined him for the length of the Marina Green and then discovered he was so interested in covering ground he had missed noticing both the yachts moored beside us and Alcatraz offshore. No close observer, he.

Just as Chase wanted to see the coast before progress destroyed a way of life, so do others now put on backpacks with similar intentions. But the variations of our coast, as of the whole world, are being constantly diminished. With the proliferation of chain hotels, theme parks, and pseudo-places, local differences are obliterated by a kind of worldwide monoculture. This creates an even greater urgency to savor what's still there, while it's still there. Often the adventure-some traveler is shocked at what he finds: "The first thing we see as we travel around the world is our own garbage, flung into the face of mankind," Claude Levi-Strauss has written. That being so, there is no longer anywhere else to go. Perhaps, as essayist Anatole Broyard has suggested, "We will have to learn to travel differently, not so hungrily, nor in such a desperate spirit. We may even have to learn to love, or at least to live with the place where we are, to see ourselves as picturesque."

Kennard's *Landmarks* attempts to do exactly that. Like Chase and Marryat, Kennard came from England. Having grown up with a sense of the past within the landscape, he

The Coastal Trail Today

needed to search it out in California to feel at home. In this book he discovered it. The volume juxtaposes early writers' words about places in the Bay area with Kennard's photographs of the place described, as it now exists. It is an invitation to the reader to join the discovery.

Of course, that is the essence and the charm of all such journeys, for we all want to be discoverers. A veritable industry has been created on this desire. Courses are available, tours beckon. Pick up your newspaper, and you'll find whole lists of outings offered by diverse organizations, all touting discovery of California by means of walks, hikes, canoe trips, and bicycle rides.

A visiting Elsewherean might get the idea that we are the most restless people on Earth—until he reads *The Songlines* by Bruce Chatwin, and learns that the Aborigines of Australia walk about to establish their territory, much as birds with their calls ensure their even spacing over the habitat. Maybe that is what all these writers were doing. Indeed, it may be what we do ourselves when we walk along the Santa Barbara waterfront, take the Dipsea Trail from Mill Valley to Stinson Beach, or join the Coastwalk, equipped with plastic bags to gather stray garbage, kicking up sand, listening, as Chase did, to "the monotonous voice of the surf lulling the earth with its unceasing narration." □

Margot Patterson Doss, dean of American walker-writers, is best known for her weekly column in the Sunday San Francisco Chronicle. She is the author of nine books, and a world traveler.

For further reading, see Page 48



Eventually it may again be possible to walk the coast from Mexico to California without ever having to trudge in the wake of auto exhaust on the side of the coastal highway. The California Coastal Trail is in the California Coastal Plan, and, piece by piece, it has been materializing, through the work of many trail advocates and their allies.

Right now the walker who starts at the Oregon border will have a fairly easy time of it for many miles. Much of the Del Norte County coast is accessible, as is that of Humboldt County. A new annotated map, covering 60 miles of the "Lost Coast," has been published by the California Coastal Trails Foundation, to guide walkers through the King Range and the Sinkyone Wilderness.

In Mendocino County access is far less developed, and much of the way has to be made either by trespassing or along the highway. But in Sonoma, more than half the coast is in public ownership and the walker can travel freely much of the way. The biggest gap is the 9-mile stretch occupied by Sea Ranch, where there is no lateral access.

In San Francisco and Marin County, the Golden Gate National Recreation Area provides passage. But "if someone tried to walk from San Francisco to Monterey, he would spend a lot of time along the highway," according to David Sutton, director of the Trails Center in Los Altos. "The coastal trail is not in the planning stage yet."

In Monterey County, frontage roads on the coastal side will be more pleasant than the side of the highway. In Big Sur, there is a network of trails through the Los Padres National Forest. In San Luis Obispo County, one can walk a goodly distance on the beach.

The Coastal Trails Foundation, which is working toward a coast-long trail, has also published a map of the Santa Monica Mountains, which will take the walker through Point Mugu, Malibu Creek, and Topanga state parks and Will Rogers State Historic Park. However, the links are not complete, and some returns to the highway will be required. "One way to build constituency for various places is to map it," says John McKinney, executive director of the Trails Foundation, who has walked the length of the state's coast. But people also need to think of the trail as a whole, he adds. And for this we need many more maps, a consistent signing system, more hostels, and trail camps.

The Santa Monica Mountains and Lost Coast maps are available from the California Coastal Trails Foundation, Box 20073, Santa Barbara 93120. State and national parks provide maps, and full-size maps of the state parks are also contained in the California State Parks Guide, Olympus Press, Box 2397, Santa Barbara 93120 (221 pp., \$14.95 including tax and shipping). Trail maps, mostly inland, through the counties of San Francisco, San Mateo, Santa Cruz, and Santa Clara are available through the Trails Center, 3898 El Camino Real, #205A, Los Altos, CA 94022.

Tale of a Military Trail

TRAILS DON'T just happen today as they did in earlier times, when walkers simply followed the easiest and most pleasant route over the land. Today someone must first conceive or envision a trail, then work to bring it about. Not only is a plan required, but also persistence, cooperation, and attention to timing. A case in point is the story of the San Francisco Presidio Historic Trail.

In 1961, when I began to write my column, "San Francisco at Your Feet," in the Sunday *San Francisco Chronicle*, I sought out the Presidio's public information officer, Col. E. W. Richardson, with a historical question. He directed me to Sgt. Charles Hawkins, whom I found tucked away in a minuscule office. When I told him my question (it had to do with a historic well), his eyes lit up with the joy of a

commanding officer (CO).

The next time I saw Charlie Hawkins he was crushed. "The CO turned down our trail," he said.

In those days I lived just half a block from the Presidio and delighted in the bagpipe music we used to hear during military ceremonies on the parade ground. Often on Friday afternoons, my four small sons and I would walk over to watch the flags flying and the men marching. The best ceremonies were always those marking the retirement of a general or the installation of a new one as CO, for the Presidio is a great retirement post for ranking Army officers, just as San Diego Naval Base is for ranking Navy officers.

"Cheer up, Charlie," I consoled him. "We'll try again on the next CO." Four generals came and went

tour of the 1,500-acre post, Gen. Meyer inquired: "But where is your historic foot trail?"

The public relations officer was ready. "Sir, we have one," he responded, producing the map. "It just has never been activated."

"We'll activate it," said the general. "Send me the man who compiled this."

Sgt. Hawkins was due to leave in a month for Okinawa. Learning this, Gen. Meyer ordered that the trail be built within the month.

Within minutes, Col. Richardson was on the phone to me. I remember the moment well, for I was on my way to a ladies' lunch, dressed in a new pale tan cashmere knit dress, high-heeled shoes, and nylon stockings. "Come out right away, Margot," he said, "and walk the Presidio Historic Trail with Charlie Hawkins." Then he told me the good news, and I decided to skip lunch.

Charlie, however, was on leave, preparing to ship out. Looking for someone else to walk the trail with me, I found only a portly young corporal in the community relations office, and he flatly refused: "Not in my line of duty."

I located the colonel, then, lunching at the Officers' Club. "I'll walk it with you myself," he said stoutly, "but"—and he looked ruefully at my nylons—"maybe you don't want to do it in those clothes."

"My hiking boots are in the car," I told him, and we were off bush-whacking to break the trail. Some of our route was through terrain so rough we had to go cross-country. We came upon a fuzzy peach-colored bat clinging to a bush, and we scared up quail. It was a glorious walk, with exhilarating glimpses of the sea and the bay. Finally, with my stockings in ruins, my new cashmere dress snagged, and a book full of notes, we came back to our starting point.

Six hundred Boy Scouts walked those seven miles during the next



OFFICIAL U.S. ARMY PHOTO

Margot Patterson Doss, Eagle Scout George L. Smith, and officials at opening of a new gate to the Presidio Historic Trail.

true scholar. Soon he was pulling out information, records, photographs—far more material than I could use in a single column.

He showed me a map on which he had marked 26 points of historic interest. We connected them with a pencil line, making a loop that represented about seven miles. Excited, I took the map to Col. Richardson. He said he would show it to the post's

before anything happened. Then, in 1965, Brig. Gen. Charles R. Meyer took over the command of the Presidio, headquarters of the Sixth Army. He was both a history buff and a scouting enthusiast. He knew that Boy Scouts need to walk trails to earn their Historic Trails Award. At that time the nearest trail available to Bay Area Boy Scouts was in the Mother Lode country. So after his welcoming

three weeks. I wrote not just one column about the Presidio but three. The official opening was scheduled, then pushed ahead two days to assure that Sgt. Hawkins could be present.

So successful was the historic trail that 11 years later, at the height of the ecology movement, the Presidio created another foot trail, the two-mile Ecology Trail, which invites a look at the way a place described in 1852 as "a bleak and windy situation" was transformed into a pleasing green oasis through an inspired tree-planting program, initiated in 1880.

As for Sgt. Hawkins, he went from Okinawa to Alaska, carrying with him proudly the Second Oak Leaf Cluster to the Army Commendation Medal, "for meritorious service" and "superior dedication to duty" for having been "directly responsible for the survey and establishment of the Presidio Historic Trail," and having "contributed immeasurably to the Boy Scout Program." The commendation noted that in his seven years at the Presidio, he had conducted 892 guided tours for 36,588 people.

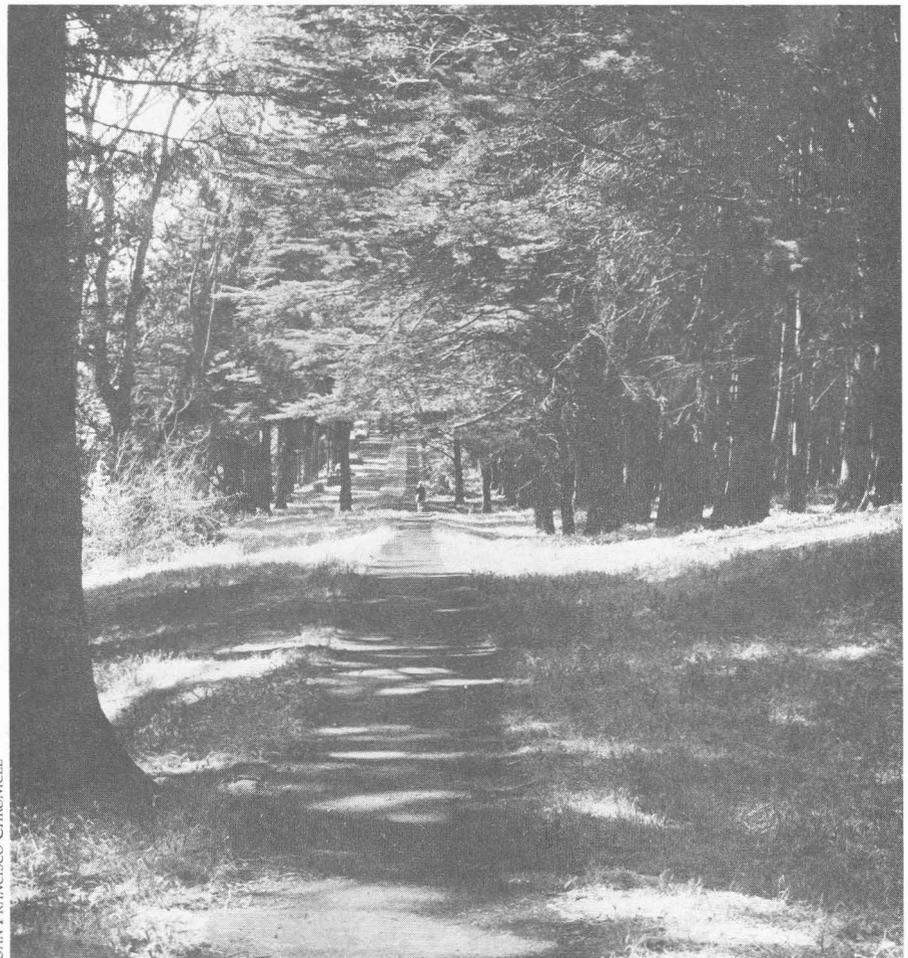
He retired in 1968 and returned to San Francisco. The trail had lost a mile to new construction, but was well trodden. Now, at age 70, Charles Hawkins is a National Park Service ranger, site manager at the Fort Point National Historic Site. His only complaint: not enough time, now, to take people out on the trail.

—Margot Patterson Doss

Maps are available at the Presidio Army Museum (Lincoln Boulevard and Funston Street) and at the Provost Marshal's office (Lincoln at Graham Street). The Presidio is an open post, so there is no need for permission to walk the trail.



JIM MILTON



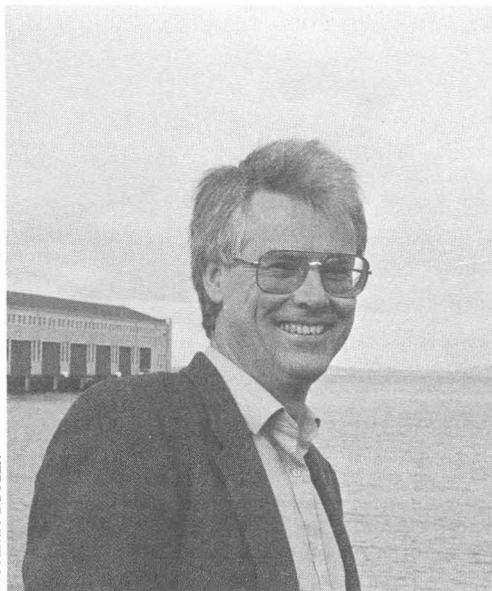
SAN FRANCISCO CHRONICLE

Top: Sgt. Charles Hawkins. Bottom: Lovers Lane began as an Indian trail and has long been a favorite of walkers in the San Francisco Presidio.

Engineering with Nature

An Interview with Philip Williams

AS RESTORATION OF coastal resources grows in importance, the role of the engineering profession is changing. Instead of building bigger and better dams and other water projects, more and more engineers are now being called on to undo design mistakes of the past. They are restoring tidal flow across man-made barriers, putting the meanders back into streams that predecessors had proudly straightened and confined within cement channels, and redeveloping degraded coastal wetlands as rest stops for birds on the Pacific Flyway. Through his San Francisco-based firm, Philip Williams has been engaged in this kind of work for nearly a dozen years. He was interviewed for *Waterfront Age* by Lee C. Ehmke.



ROBERTA BUTLER

Philip Williams

Waterfront Age: *Do you see a change in the engineering profession as a result of the heightened environmental awareness of the last 15 to 20 years?*

Philip Williams: Yes, I think so. Particularly in the younger engineers you see a great enthusiasm for the kind of analysis we do—looking at alternatives in flood control design, say, instead of putting in concrete channels, looking at ways to preserve natural riparian vegetation while at the same time protecting people against flooding.

WA: *What distinguishes Philip Williams & Associates from most engineering firms?*

PW: We specialize in hydrologic and hydraulic engineering as related to natural resource management, so we have a wider range of expertise than you would find in a traditional water engineering firm. I, myself, though I have a Ph.D. in sediment hydraulics, also have a background in environmental planning. We have geologists, geomorphologists, geographers on staff, as well as more traditional skills. And we emphasize integrating environmental planning into technical analysis because you cannot develop a good technical analysis without properly considering environmental variables.

WA: *What led you to this kind of practice?*

PW: Well, shortly after I came to this country from England in 1970, I went to work with Bechtel, Inc., in their pipeline division. I was sent out to Black Mesa, to the Navajo reservation, to work on opening up the strip mine. And that was quite an eye-opener for me. It was my first exposure to environmental issues. One day we were all ordered to stay in camp because there was going to be a demonstration outside. And these Hopi Indians showed up, and they performed a dance, a ceremony. They were protesting against the strip mine, and it made me think about what we were doing out there. So later on I quit, and I went to work as a volunteer scientist at the Environmental Defense Fund, and through that I developed an interest in California water issues and environmental planning. I worked for an environmental planning firm for a few years, then decided to set up my own business as a hydrology consultant, emphasizing environmental protection, restoration, and management.

WA: *What projects best exemplify your approach?*

PW: Well, we've quite a range; everything from Mono Lake, where we've been working for many years for the National Audubon Society and the Mono Lake Committee, developing a basinwide water balance model to predict future levels of the lake, and helping them develop alternative water management scenarios for the Mono basin, to a lot of projects relating to coastal wetlands. The Tijuana Estuary, for example, has a problem that is common to many coastal lagoons in California: the continual loss of the tidal prism, which is to say the volume of the estuary, because of sedimentation, migration of the beach inland, and filling for development. When this occurs, you lose the tidal volume going in and out of the estuary mouth. Then in a big storm, with high surf conditions during a neap [very low] tide, sediment moves into the entrance channel and closes it. At that point, instead of a functioning estuary, you have a stagnant lagoon. So the enhancement plan we developed is to ensure that the tidal prism is large enough to keep that entrance channel scoured out. If it's imple-

mented, it would go a long way to ensuring that the Tijuana Estuary continues in existence over the next century.

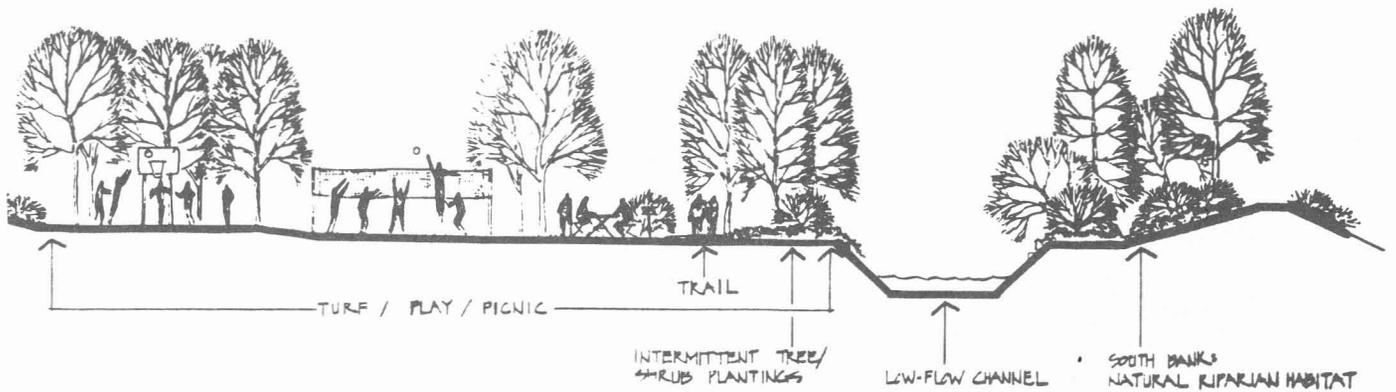
WA: *You have worked with the Coastal Conservancy on a number of projects, right?*

PW: Right. The unique thing about working with the Conservancy is that it facilitates the implementation of a good technical design. We can do a good technical design, but it's of no use if the politicians or the local people don't understand it. With the Coastal Conservancy coordinating projects, you can see a good technical plan to fruition. And unfortunately, dealing in natural resource management, there aren't many organizations like the Coastal Conservancy. Inland, you're dealing with similar problems on rivers, and you don't have an equivalent organization to this. It's harder to get things done. I do think the Coastal Conservancy could be a model for dealing with natural resource management, particularly in the area of restoration.

WA: *In restoring wetlands, would you agree that hydrologic planning is probably the most important determinant of what vegetation will reestablish itself?*

PW: To do a good wetland restoration, you have to have a team, including an environmental planner, a botanist, a biologist, and an engineer/hydrologist. So you've got to integrate these disparate disciplines. The hydrology part of wetland restoration has been neglected, partly because it's been the biologists who have been interested in wetlands. Very few engineers or hydrologists are really working in wetlands. I have been trying to interest various universities to get involved in more teaching of wetlands and wetlands hydrology or estuarine hydrology. Maybe it will happen, but I can only think now of one university in the United States that's teaching wetlands hydrology specifically—the University of Virginia. There's so much interest now, and such an understanding of the importance of wetland hydrology in wetland

“The hydrology part of wetland restoration has been neglected, partly because it's been the biologists who have been interested in wetlands.”



Instead of a previously proposed concrete channel and box culvert, Wildcat Creek in Richmond is being engineered as a natural low-flow channel with an adjacent floodway doubling as park space.

restoration or estuarine management, there's got to be more focus on that in education. It's just been a big gap. We're very conscious of how little research has been done on wetland hydrology compared to, say, research on wetland biology.

WA: You also do stream restoration?

PW: Yes. Along Walker Creek in Tomales Bay, we are putting together a proposal with the help of the Marin Conservation Corps to try and restore some of the grasslands that used to exist in that watershed, to reverse the degradation that's going on, causing gullying and arroyo formation. If that can be developed as a kind of demonstration project, it will show that you can actually restore some of the natural perennial bunch grasses that used to exist, and that you can graze those bunch grasses, and still keep a productive ranch going. That could have a great impact, showing that you can restore your watersheds and restore the streams and protect your coastal wetlands, and at the same time have a productive farming economy in the watershed.

WA: Have some projects you've worked on been implemented, and have they worked out so that they can serve as examples for a new effective approach?

PW: Yes, there are some—not as many yet as I would hope! Unfortunately, there's a big time lag between planning or designing a project and its actually getting constructed. We have projects being completed now that we were involved in designing back in 1980 or 1981. One is the Warm Springs Marsh down in the South Bay, which was opened up to tidal action last year—a 250-acre new tidal wetland. We're very interested in fol-

lowing how that marsh evolves because what we learn from that will help us design other wetland restoration projects. We do a lot of work related to flood control design, too. We're working for the city of Santa Cruz on the San Lorenzo River through the city, and for the Contra Costa Flood Control District at Wildcat Creek.

WA: How did the Wildcat Creek project develop?

PW: There has been a terrible flooding problem in the lower part of Wildcat Creek for many years. Development took place in the flood plain after World War II. The Corps of Engineers proposed a very expensive channel, which was opposed by many people. The county tried to develop its own solution, a low-cost channel. Then local environmentalists and community organizations got together and decided that instead of fighting these projects, they would try to propose an alternative. We were contacted to design an alternative channel that provided an environmental benefit rather than a kind of concrete sewer in the community's back yard. A design team was set up to develop a consensus plan incorporating elements of the different alternatives. And because that process was developed, a consensus design was reached, and the project is now being constructed. A key element was participation of organizations including the Coastal Conservancy, which were able to contribute funds for the environmental enhancement part of the project. Because at the downstream end of Wildcat Creek there's a significant coastal wetland which would be affected by whatever design was adopted.

WA: Your firm has carved out a niche, advocating environmentally responsible engineering. Will others be able to enter, or is this a limited niche?

PW: Oh, I see it as an expanding field! There's a lot more interest in restoration and enhancement in the last five years. I was at a conference on climate change in Villach, Austria. One thing that came out of that was the potential for reforestation and restoration of grasslands as a way of storing carbon from the atmosphere because in their growing period, trees and grasses will take up carbon dioxide out of the atmosphere. It's one of the ways you can help to control the Greenhouse Effect. It may be more effective to do something like that than to provide sea walls around major cities to protect them against rising sea levels.

WA: *Where has engineering failed us in the past?*

PW: One of the big problems we've had is an overly simplistic approach to water resource management. For example, if the problem is perceived as water supply, a dam is built, a plumbing system is installed, without real regard to the consequences of constructing it. That's the way it's been done. So California's water development has occurred for irrigation, power, and flood control. But when you build a dam, you're also affecting resources in the river and the estuary downstream. We are now living with the consequences of not considering this. Last fall we had hearings to establish the freshwater inflow needs of San Francisco Bay—something that should have been done at the time the dam projects that affect that flow were planned. So we're trying to correct errors made back in the '40s and '50s. Planning for the Central Valley Project and the State Water Project completely ignored the needs of San Francisco Bay. The Bay wasn't even considered as an estuary. It was seen as some sort of branch of the ocean that came in.

So that's an example. Another is in flood control. You see concrete channels built, or straight rock-lined channels replace a natural stream, and then subdivisions are built right up against the banks of the creek. Maybe ten years go by and everything's fine, and then a big flood, like 1982 or 1986, comes along, and people get flooded even though you have a flood control project: it didn't work. And then you start looking into the reasons why it didn't work, and you start seeing that,

well, these channels were often designed without considering that there was sediment in the water, that sometimes there was vegetation obstructing bridges, causing water to flow out of the banks and flood. You can spend a lot of money building a project that really doesn't work when you need it.

But you can anticipate such problems if you start thinking of the creek not as a sort of plumbing problem, but as part of a watershed, part of a holistic system.

WA: *Some past mistakes are certainly being noticed now, and in certain instances, for example, in the Everglades, millions of dollars are now being spent to undo the works of earlier engineers. Do you see this as a trend?*

PW: We are now in the post-water development era in California. Pretty much all the big dams have been built; all the plumbing's been done; now we're living with the problems and we're trying to correct them. At the same time, some people are starting to realize what can be restored. In this state a great deal can be done—particularly in the estuaries, in coastal areas.

WA: *Is the Hetch Hetchy proposal feasible?*

PW: Very feasible. But it's really a question of money. And I think you're going to see more and more proposals like removing Hetch Hetchy. Another that may come up is the New Melones Dam, which was the subject of great controversy not so long ago. The Resources Agency did a study showing that it actually costs more to operate than was being received for the water that it sold. Forget about paying off the cost of the dam itself. Just to operate the dam is not cost effective. Looking ahead, there's much less federal money available for big engineering projects. But you're still going to have to deal with problems like flooding. There was a time when you could just put in a big concrete channel. Now you'll have to come up with more sensible designs. □

"We are now in the post-water development era in California. Pretty much all the big dams have been built; all the plumbing's been done; now we're living with the problems and trying to correct them."

Let's Do Lunch

Editor's note: This space invites readers to express views on topics related to urban waterfronts. This issue's contribution is by Victor Leipzig, president of Amigos de Bolsa Chica and a resident of Huntington Beach.

SOUTHERN CALIFORNIA has a large but undetermined number of local environmental groups dedicated to the protection of coastal wetlands. Virtually every major wetland has its "Friends of" group. Any coastal wetland without such a group is probably in serious danger of being developed into condos or parking lots. Fortunately, more of these groups are forming every year.

These local groups play a central role in environmental protection. State and federal environmental agencies and regulatory commissions cannot be expected to resist the political pressure for development of wetlands unless someone raises countervailing political pressure from the local community or is willing to step in and purchase wetlands for long-term preservation.

Many of these groups start with little knowledge of wetlands ecology, environmental law, or experience in organizational subtleties of fundraising, communicating with the media, and political lobbying. But after a while, some groups accumulate great levels of experience in their political and legal struggles. I think of the Friends of Newport Bay. They have protected some 750 acres of marsh—one of the best-preserved Southern California marshes—as a state ecological preserve. Their success has led others, including the Amigos de Bolsa Chica, to pattern themselves after the Friends. Now that the Amigos' struggle to protect the Bolsa Chica estuary at the far western tip of Orange County is almost 12 years old, they too are coming to be seen as a senior organization that sets a pattern for others.

Unfortunately, the wealth of experience accumulated by the older groups is not effectively available to newer organizations. Since the sharing of information is fitful at best, each local group is forced to reinvent the wheel when it comes to developing its program and strategies.

This situation is not all bad. Each group necessarily develops its own style and a way

of doing things that is adapted to its setting. The independence and community orientation of local wetlands groups are precisely what give them their strength.

But by working in isolation from each other, we waste energy and miss opportunities to increase our strength and effectiveness. We can break down that isolation without losing our valuable organizational autonomy. Periodic meetings of representatives of the coastal groups in each county might provide a way to share the wealth of information each group has gathered.

Such get-togethers should be kept local: the more locally oriented the meeting, the greater the common interests of the participants. As an example, San Diego County has a half dozen coastal marshes or lagoons, each with one or two organizations dedicated to protecting it. San Diego County forms a convenient ecological as well as political unit. Orange County, on the other hand, does not



LEE C. EHMKE

have as many wetlands or as many wetlands organizations and therefore might gain by working jointly with Los Angeles County.

In the San Francisco Bay area, wetlands groups have a loose coalition that keeps them somewhat coordinated. Not so here in Southern California. I'm not suggesting a new organization, or even a coalition. After all, who has time to make it work? But I do think we should get together once in a while.

Statewide organizations like the Coastal Conservancy, and allied groups like the Trust for Public Land, provide invaluable services and information, but the time has come for local activists to begin learning from one another. □

Book Reviews

Flying High

Tracks in the Sky: Wildlife and Wetlands of the Pacific Flyway, Tupper Ansel Blake, photographs; Peter Steinhart, text. Chronicle Books, San Francisco: 1987. \$35, 176 pp

Each year, on one of those crystal November mornings following the first rains, I take my ornithology class up Twin Peaks to survey the kingdom and read the opening chapter of *The Ohlone Way*. The reading describes "the way it was," not in the Herb Caen-sense, but back in the time of the Miwok Indians and early Spanish settlers. Images of elk browsing the tule-fringed wetlands south of Rincon Hill, strings of geese and ducks calling overhead, thousands of peeps and pipers on the mudflats—a busy, crowded, natural world spreads out before us as we read. We peel back the modern urban Bay area like an overlay in a biology book. It is an exciting glimpse of what has gone before. Too soon we are back in 1987 with the white-crowned sparrows and herring gulls lined up along the new wall, anticipating the arrival of the first tour bus. The skies are empty of the great flocks, and we must travel to pockets of marsh in Marin or down the peninsula to observe the migrants who have dropped in for the winter or are passing through on their way farther south.

In *Tracks in the Sky*, Peter Steinhart gives us a "state of the flyway" report, a thoughtful consideration of the subtle beauty of wetlands and their importance to migratory bird populations. He takes us from breeding grounds in Alaska and northern Canada to wintering areas in southern Oregon, California, and Mexico. All along the way the wetland habitat is under attack as agricultural expansion, population pressure, and the ever increasing competition for water resources dry up the marshes and decimate the populations of migratory birds. We see how our contemporary problems can be traced to historically negative attitudes toward swamps and marshes as wasted lands to be "reclaimed" with tax-funded state and fed-



TUPPER ANSEL BLAKE

**Yukon-Kuskokwin
Brant**

eral projects. Attitudes in these regulatory agencies are changing to recognize the value of wetlands, but seemingly too slowly to effectively compete with the high pressure demands of greed and short-term interests allied with the power of private ownership. The book calls out to us to help in the conservation effort. Knowledge of the problems that is gained through reading *Tracks in the Sky* coupled with the vision of beauty that is generated by the photographs will encourage many readers to put their effort toward "saving the pieces." As the pieces get smaller, the conservation effort must get more insistent in its demands for habitat preservation.

Tupper Blake's delightful photographs, in contrast to the text, are wild, beautiful, and without controversy. Vast panoramas of pristine habitat, many from a bird's-eye aerial perspective, are juxtaposed with close portraits of wetlands dwellers. For those of us who observe the birds on their yearly passings and wonder at their destinations north and south, the photographs provide a real vision of both the places and activities of the birds. These truly exceptional photos give little evidence of the problems facing today's migrants. They are a vision of the untram-

**Snow Geese at
Tule Lake.**



TUPPER ANSEL BLAKE

meled wilderness as might have been viewed by the earliest explorers.

I found the map depicted on the book's end papers to be essential in following the lengthy descriptions of locations along the flyway. Maps showing topographical detail affecting migration routes would have been even more useful, but perhaps disturbing to the format of clear text and full-page photos.

The chapters on the natural history of mud and the evolutionary compatibility of man with water are most informative and thought-provoking. The suggestion of such an ancient harmony with water makes sense to parents who have discovered how children playing at the beach or along a stream seem endlessly inventive and at peace.

In ornithology class we discuss the concept of an "indicator species," the canary-in-the-mine concept of an early warning system of environmental hazard to man. It becomes clear in reading *Tracks in the Sky* that the severely declining populations of wetlands-dependent species should be seen as a sign of troubles ahead for our water resources and quality of life.

—Allan Ridley

Allan Ridley is a biology teacher at the Urban School of San Francisco and a lifelong naturalist.

Tempus Puget

Maritime Memories of Puget Sound, Jim Gibbs and Joe Williamson. Schiffer Publishing Ltd., West Chester, PA: 1987. \$14.95, 184 pp

Capt. George Vancouver is credited with "discovering" the glaciated rift of the Pacific Northwest named after his young lieutenant, Peter Puget. And since the ship *Discovery* first sailed on this inland waterway 200 years ago, Puget's Sound has evolved through the exploitation by men of commerce and industry of the natural resources in its waters, and along its shores and timbered uplands.

This welcome reissue is a fond tribute to those who have lived and worked on, off, and adjacent to this 100-mile long inlet with its thousand miles of jagged shoreline. With enthusiasm and considerable firsthand experience, the authors have done an imaginative, skillful job of assembling this largely anecdotal history. Illustrated with hundreds of informative and well reproduced, mostly photographic images, the text is enriched with telling captions that encourage the reader to study each photo for more than just its superficial data.

Today's major port cities on the Sound take a back seat here to the vanished Utslady

and Port Blakely and many other waterfront towns whose once great days are deep in the past. And throughout there are the images of the waterways and staggering variety of craft that have transported people, their gear, their products, and their dreams within the Sound and to and from all corners of the earth.

The book does not champion an activist position toward conservation or preservation; in fact it honors the active uses of this waterway to stoke development, growth, and change. The view is decidedly macho, no surprise in a maritime history, but it also is caring. The conservation espoused here is of the telling anecdote, the articulate photograph; for in the face of inexorable change, these memories say, let us pause to remember what else has held sway where we now in our turn so proudly, so briefly, tread.

—Jonathan Ezekiel

Jonathan Ezekiel is currently a water-borne resident and image maker of Seattle and art farm manager in the San Juan Islands.

Other books by Jim Gibbs recently published by Schiffer:

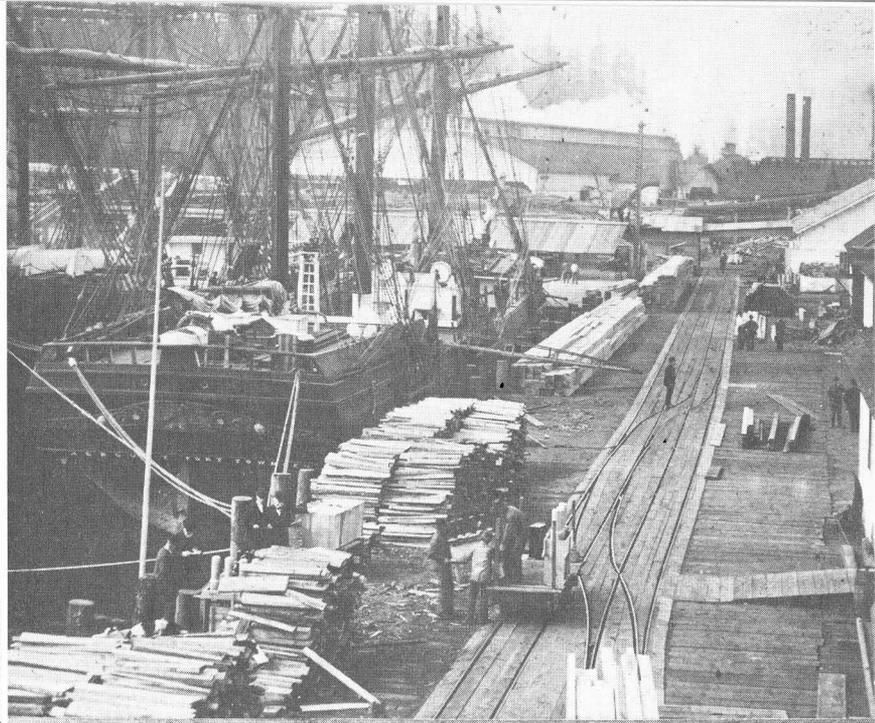
Pacific Square-Riggers, \$19.95, 224 pp.

Windjammers of the Pacific Rim, \$19.95, 232 pp.

Tijuana Estuary Overview

The Ecology of Tijuana Estuary: An Estuarine Profile, J.B. Zedler and C.S. Norby. U.S. Fish and Wildlife Service, Biological Report 85(7.5), 1986. 104 pp. Available free from the U.S. Fish and Wildlife Service, National Wetlands Research Center, 1010 Gause Blvd., Slidell, LA 70458.

Following the completion of a series of books on ecological communities along the Pacific Coast, the U.S. Fish and Wildlife Service has initiated a series that describes the ecological relationships within complete estuarine systems. The first in this series for the Pacific Coast is *The Ecology of Tijuana Estuary: An Estuarine Profile* by J.B. Zedler and C.S. Norby. Recently designated as a National Estuarine Sanctuary, the Tijuana Estuary is an excellent example of the uniqueness of Pacific coastal wetland systems. The seasonal and yearly variability in the supply of water, sand, and mud create a diverse ecosystem always



JOE WILLIAMSON

subject to natural modifications. However, the added impact of urbanization and watershed development has overwhelmed the natural system's ability to modulate environmental extremes. The Tijuana Estuary is a microcosm of the urbanization of coastal California: increasing sedimentation of tidal channels, modifications of coastal dunes, changes in stream flow, and increasing pollution.

Zedler and Norby have provided an excellent overview of the Tijuana Estuary, its history, geophysical surroundings, ecological communities, and ecosystem functioning. This is a book heavy in data, certainly most suitable to resource managers, scientists, and for college-level instruction. However, the readership may be wider because the authors provide a clear description of the many plants and animals that thrive within the estuary and their interrelationships with one another. In addition, the chapter on management issues returns the reader to the practical application of basic ecological sciences. Coupled with the unique pen-and-ink illustrations by Donovan McIntire, this profile is important documentation of our current knowledge of Southern California estuaries.

—Michael Josselyn

Michael Josselyn is a professor of biology at San Francisco State University and director of the Romberg Tiburon Center for Environmental Studies. His professional work focuses on the San Francisco Bay estuary.

**Loading at
pierside of the
Port Blakely Mill
Company, largest
of its kind on
Puget Sound in
the 1800s, is the
square-rigger
Mercury.**

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Copies are available of all issues except Vol 1, No 2 and Vol 3, No 1. Contact the State Coastal Conservancy, 1330 Broadway, Suite 1100, Oakland, CA 94612. (415) 464-1015.

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vironmental protection and conservation should be given more importance and would receive widespread public support.

So we've identified two areas in which signs of crisis recognition are starting to emerge: communication and finance. Both must be brought to bear on treating problems at their source, rather than attempting to combat their symptoms and other effects. This eventually must mean changes in what industrial technologies we use, how we use them, and for what ends. If we are to have a real chance at changing course to avoid self-destruction, however, we must protect certain absolutely essential land resources now, probably by public acquisition, to avoid their loss forever. The time to act is now, before our interpretive centers have nothing left to interpret except "Soylent Green" reruns. □



ANDREA HENDRICK

Trekkers

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Further Reading

California Coast Trails, A Horseback Adventure from Mexico to Oregon, J. Smeaton Chase. Tioga Publishing, Palo Alto, CA: 1987.

Mountains and Molehills or Recollections of a Burnt Journal, Frank Marryat. Stanford University Press, Stanford, CA: 1855, reprinted 1952.

Eldorado; or, Adventures in the Path of Empire, Bayard Taylor. Putnam & Co., New York: 1850, revised 1892.

In the Footprints of the Padres, Charles Warren Stoddard. A. M. Robertson, San Francisco: 1902, revised 1912.

San Francisco Bay Area Landmarks: Reflections of Four Centuries, Charles Kennard. Tioga Publishing, Palo Alto: 1987.

California Coastal Trails, John McKinney. Capra Press, Santa Barbara: 1983. (Out of print)

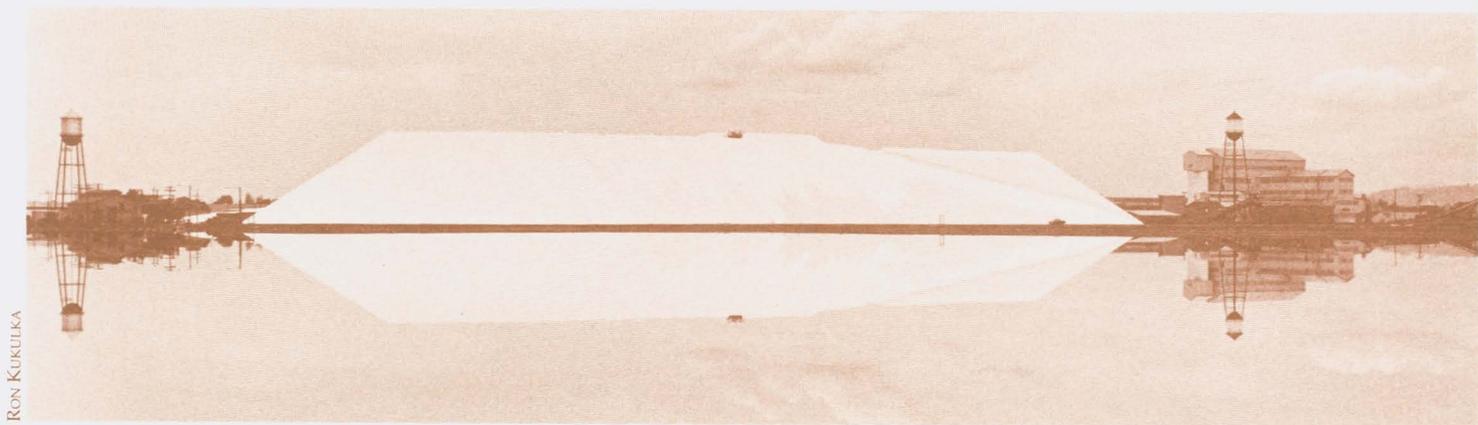
Indian Tales, Jaime D'Angulo. Farrar Straus Giroux, New York: 1962.

Ishi in Two Worlds, Theodora Kroeber. U.C. Press, Berkeley: 1961, 1976.

The Ohlone Way, Malcolm Margolin. Heyday, Berkeley: 1978.

The Songlines, Bruce Chatwin. Viking, New York: 1987.

Phoenixiana or Sketches and Burlesques, John Derby. D. Appleton & Co., New York: 1855. (Out of print)



RON KUKULKA

Mystery Photo



Uranium tailings? Glaciers? The snow-capped Sierra Nevada? *Waterfront Age* will award a free 1-year subscription to any and all readers who can identify this bleached Bay area landscape, photographed by Conservancy Deputy Director Ron Kukulka.

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