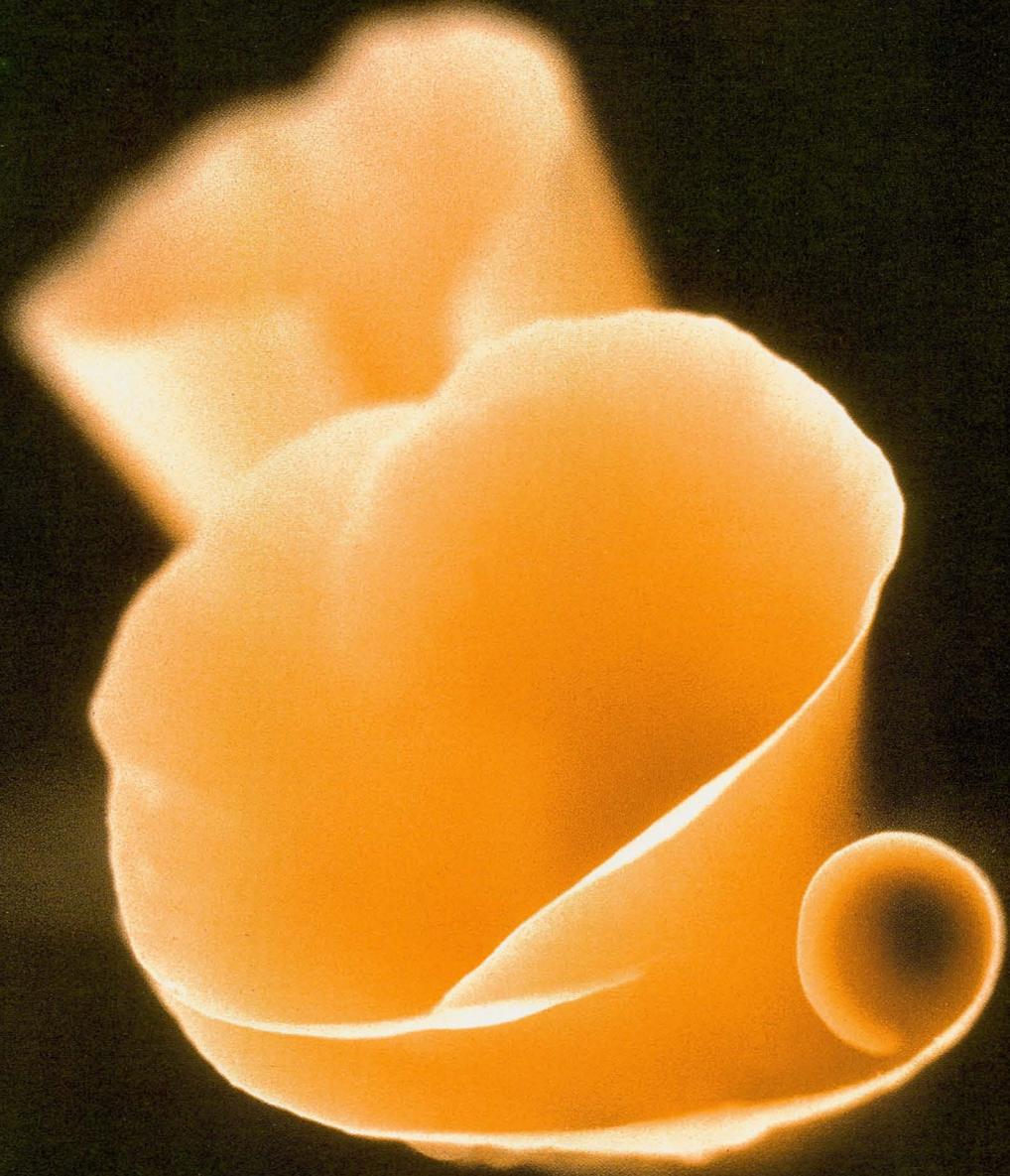


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COAST & OCEAN

VOLUME 16, NO. 4

WINTER 2000-2001 • \$4.95



Sharing Space with Wildlife
Proactive Ranching

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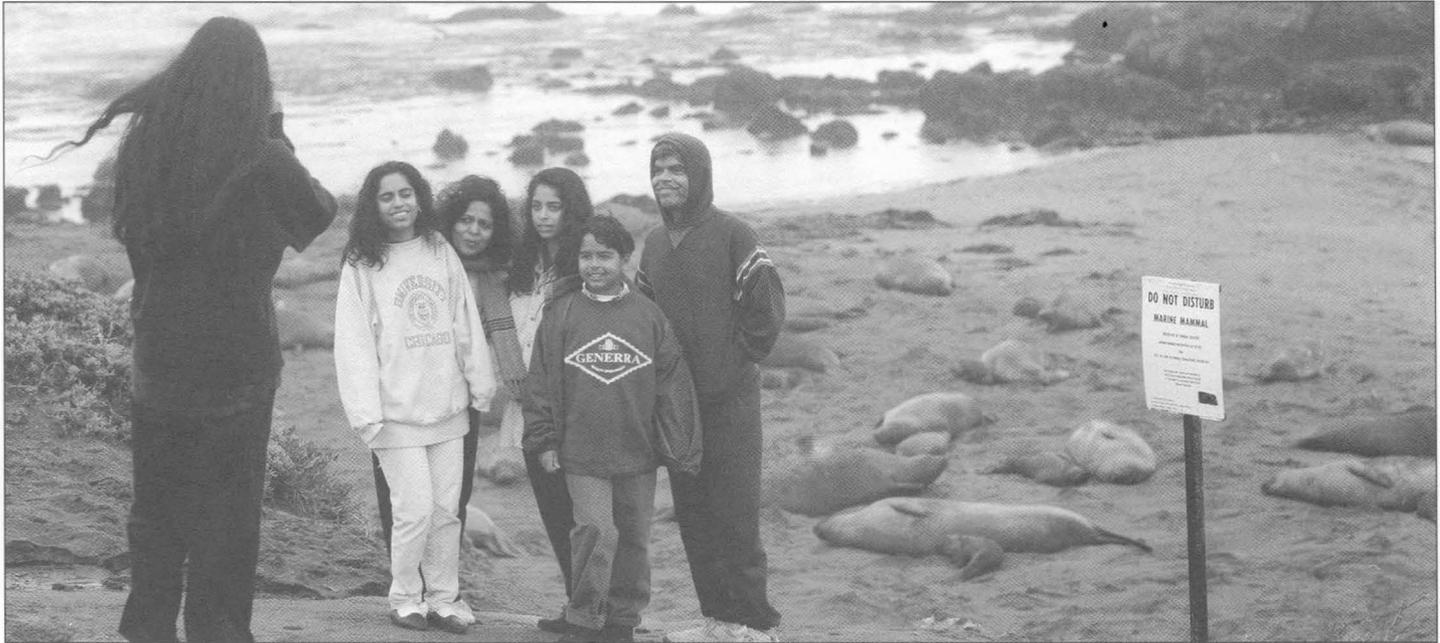
Cover photo: California poppies. Carol Arnold hopes to gaze at the coast through her camera lens more often now that she has retired as the Coastal Conservancy's Central Coast program manager. She continues as a part-time special projects manager.

Back cover: Tule elk, Department of Fish and Game

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Dark Wings over Big Sur

ALMOND TREES ARE BLOOMING as we close this end-of-winter issue, and golden California poppies raise their heads above the soggy ground. Soon, five young condors will be released on the Coast Ridge in Big Sur, bringing to 19 the number flying free in ancestral territory along the central coast.

Spreading giant wings—nine feet from tip to tip—they will rise on the updrafts and ride the winds, patrolling 100 square miles or so a day. They will swoop along slopes in Los Padres National Forest and the Ventana Wilderness, soar above peaks and valleys, drop down over the shoreline to check for dead sea mammals, and fly southeast over historically rich feeding grounds in the San Antonio Valley and the Santa Lucia Mountains. They are larger than eagles—so large, according to *The Sibley Guide to Birds*, “they may be mistaken for an airplane.”

At what is now Ft. Hunter Liggett in those mountains, the U.S. Navy plans to build a bull’s-eye target to train pilots flying F/A-18 Hornet fighter jets (the kind flown by the Blue Angels; wingspan 40 feet). It projects close to 3,000 sorties a year, five days a week over 47 weeks. An average sortie involves three aircraft taking several runs at the target, dropping dummy bombs (that don’t explode) from as low as 500 feet.

The jets would come from Lemoore Naval Air Station, near Fresno, and also from aircraft carriers offshore, roaring across the famous natural quiet of wild lands where condors and bald eagles have come back from the brink of extinction.

How will the condors react? Nobody knows. Nor can anyone say how the eagles will fare. There’s a nesting pair now at Ft. Hunter Liggett, says Jim Davis, executive director of the Ventana Wilderness Society, which has

been highly successful in reintroducing both condors and eagles.

Will the sea otters mind? They dive when startled. That could be dangerous for nursing pups. The Navy has stated that there will be no flights over the California Sea Otter Refuge or over known eagle and condor nesting sites. But who knows where condors and eagles will choose to nest as they increase in number?

Biologists hope that an in-depth Environmental Impact Statement, with studies, will precede any bombing program. Others worry about disturbance of another rare quality. “Solitude and serenity are an important coastal resource,” said Lee Otter, district director of the Coastal Commission’s Central Coast District. In a letter to the Navy, the Commission’s federal consistency supervisor, Mark Delaplaine, has suggested “an analysis of potentially less damaging alternative sites *not* involving Fort Hunter Liggett (such as use of existing bombing ranges at China Lake and other locations).”

The Navy says this program will save fuel costs, perhaps \$3 million a year: Hunter Liggett is about 100 miles closer to Lemoore than the currently used practice site in Nevada.

To bring the condor back from the brink of extinction, the U.S. Fish and Wildlife Service and other public agencies have so far spent some \$35 million, mostly for programs in southern California and Arizona. The highly successful work of the Ventana Wilderness Society is entirely financed by private and corporate funds and donations, according to Davis.

But dollars are hardly the issue here. Something much more valuable is at stake.

The California condor is the largest land bird in North America and one of the largest in the world. It was here in the Pleistocene and we almost lost it. In

the early 1980s, only 22 or 23 were alive. Now they’re coming back because the people of this country refused to let them vanish forever. Just to know that we might see this giant vulture’s wings spread against the sky over Big Sur is thrilling. It’s to be filled with hope and gratitude.

The condor’s plunge toward extinction began in the 1890s–1910s, when eggs were stolen from nests and adult birds were shot for sale to museums and collectors. The bird mates for life and can live for 60 years, but breeds slowly: one hatching about every 18 months, says Davis.

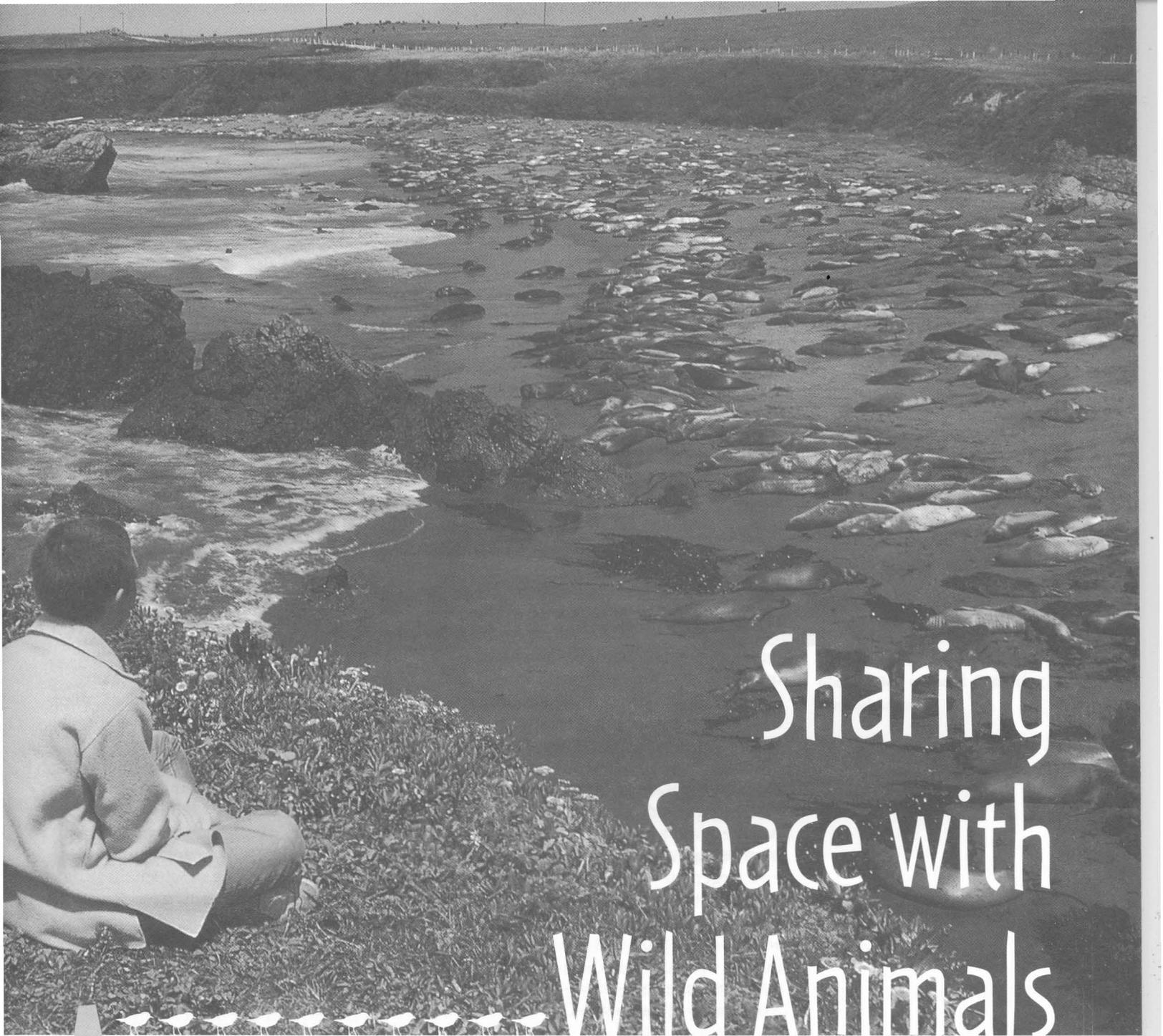
Later came poisoning. Ranchers and farmers set out bait laced with arsenic and other toxins to kill coyotes. “A lot of condors were killed,” Davis explains, because “Condors are obligant scavengers; they only eat dead things.”

Yet now the total population of the birds has grown to 160, with 45 in the wild (14 in the central coast, 10 in the Sespe Wilderness in Ventura County, and 21 in Arizona). Environmental laws and changing ranching practices have greatly diminished the poison hazard, Davis says, and the main toxic threat now is lead shot consumed from carcasses abandoned by hunters. He says “habitat is not a problem” in Los Padres National Forest and the Ventana Wilderness.

Still, the condor’s hold on survival is extremely tenuous. It needs protection.

With spring now arriving, this is a good time to see the early wildflowers in the grand natural quiet of Big Sur. Listening to the barking sea lions and the otters knocking with rocks on abalone shells, you can imagine yourself back in time, perhaps even back into the Pleistocene as you consider the bears, mountain lions, and tule elk nearby, and the bald eagles and condors learning to fly free above the Coast Ridge.

—RC



Sharing Space with Wild Animals

ROLAND AND KAREN MUSCHENETZ

ACCESS/WILDLIFE—WHERE'S THE BALANCE?

As more and more of us disperse through wild and open spaces to enjoy them in more and more ways, what about the creatures that live there? The many birds and animals along our shores, in our wetlands, and near trails cannot help but be affected. Can we avoid pushing out other species as ever more of us jog, hike, ride bicycles and off-road vehicles, fly kites, kayak, hunt, fish, and stalk birds with binoculars and cameras?

ANNE CANRIGHT

Right: The snowy plover is six to seven inches long.

Previous page: Watching seals at a sensible distance on Morro Bay, in the back bay near Los Osos



KEN GARDNER



WITH THE CONTINUED GROWTH of California's population, especially along the coast, and with more and more public lands being used for surprisingly diverse kinds of recreation, these questions are demanding attention. How can we protect endangered birds that know no better than to nest on popular beaches? How can we coexist with giant sea mammals that are reclaiming ancient breeding grounds along the water's edge? Are there ways to protect intertidal life from being trampled even as we encourage ever larger numbers of school children on field trips to appreciate tide pools?

Virtually no scientific data exist to address these problems in a general way. Indeed, solutions to these questions—where solutions have been found—are overwhelmingly site-specific. This much can be said, however, based on experience thus far along the California coast: three kinds of approaches have proved useful, separately or in combination. These are: person-to-person outreach at the scene of a problem; public access and use restrictions, firmly enforced; and wildlife-friendly public accessway design. That said, it is important to reiterate: there is no one-size-fits-all answer. It all depends. . . .

Consider snowy plovers. You've probably heard about these doughty little birds, accorded threatened status in 1993 under the federal Endangered Species Act. For well or ill, snowy plovers are genetically programmed to make their nests high on sandy beaches, where they can spot approaching

predators (both bird and mammal) from afar and where they find shelter and foraging habitat in backshore wrack. Of an estimated total population of 4,500 western snowy plovers, some 70 to 80 percent nest along eight stretches of coastal and insular California, including San Francisco's Ocean Beach, Monterey Bay, Morro Bay, and the Oxnard lowlands—all heavily used by humans.

The mere presence of humans is not necessarily a problem. Say a lone walker ventures to the shore, sticking close to the water, proceeding slowly and calmly, well away from nests (many of which these days are surrounded by protective wire-mesh fencing, or "exclosures") high up on the sand. Most likely that sole human will have no impact on the nesting plovers.

But add a single off-leash dog to the equation, and you've got trouble. Or turn that walker into a jogger looking for a little extra work up on the soft sand; or into a larger group of walkers who, curious about the wire cages, ignore signs requesting that they keep their distance. Or put that person on a horse that approaches the beach from inland dunes—never mind on a roaring dune buggy. Or even have that lone beachgoer innocently fly a kite—a kite that looks all too uncomfortably like a hawk to the tiny bird, causing it to flee its nest.

Then, multiply that lone walker, or the jogger, or the dog, or the kite flyer, by tens, hundreds, even thousands, and you can see why snowy plovers are having a hard time.

So the problem is, in large part, one of human behavior, human demands, human

expectations. Many beach users don't even know the plovers are there. Yet that doesn't matter. Once we've intruded into their territory, since they are an officially threatened species, measures are required to protect them: measures that range from the drastic—outright closure of beaches—to more friendly ones—the posting of informative (or at least politely requesting) signs and the deployment of friendly volunteers who talk to people about plovers and their needs.

The 12.5 miles of sandy beaches at Vandenberg Air Force Base are the best remaining plover habitat in the western United States, according to the U.S. Fish and Wildlife Service (FWS)—in good part because public access is severely restricted. Here, a drastic approach was finally taken after a mild one failed.

For six years, signs had been posted along a strip of sand where plovers nested, but the plover count kept dropping. Between 1997 and 1999 it plunged from 240 to 78, according to John Gunderson, an environmental attorney for the base. So last year, the Air Force and FWS closed all but a quarter-mile of Surf Beach to the public for the duration of the nesting season, March 1 to September 30. Air Force fish and game wardens patrolled six hours a day, issuing warning letters to first-time trespassers; a second offense brought a citation and subsequent fine.

There was a public outcry—more than 3,000 Lompoc residents signed petitions opposing the closure—but the the Air Force and FWS stood firm. To help the public reach the quarter-mile stretch of Surf Beach that remained open, a 3,000-foot pathway was built, bordered by snow fencing and shielded from nesting grounds. Volunteer docents, organized by the Lompoc Valley Chamber of Commerce, were stationed on the beach to educate the public about off-limits areas.

Closure was an option at Vandenberg because the beaches were on a military base and because the Air Force worked with the FWS, whose mandate is, first and foremost, to protect wildlife. The same sweeping measures may not be possible for land management agencies that are required to accommodate a variety of uses, such as the National Park Service, California State Parks, and local park and recreation departments. For them, limited restrictions must sometimes suffice. This has proved to be the case, in more than one instance, with another major threat to



COURTESY SAN FRANCISCO BAY TRAIL PROJECT

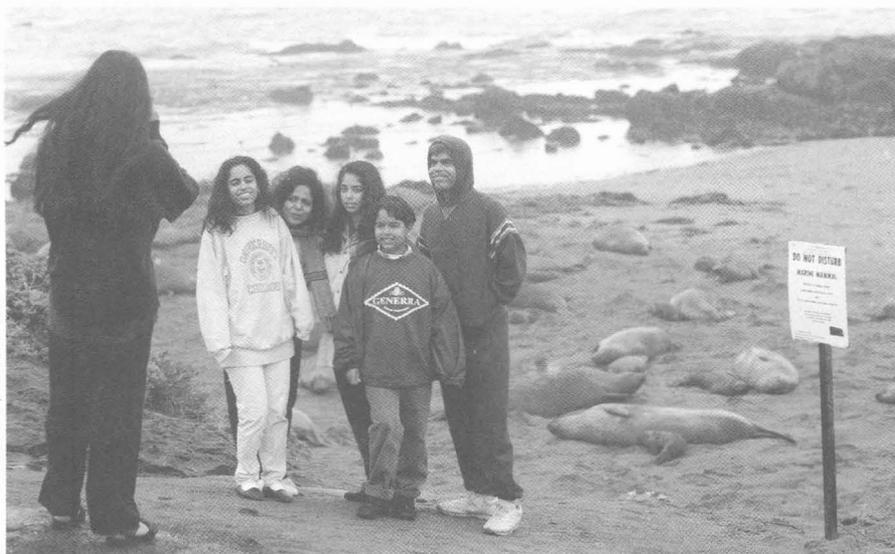
plovers: not people—who most often, when confronted by a sign explaining that an area is closed to protect nesting or resting birds, will honor it—but their pets. Dogs in particular, says Marge Kolar, refuge manager of the San Francisco Bay Wildlife Refuge, “love to run and chase wildlife—that’s just what they do.” The solution, she observes, is simple: “Put the dog on a leash.”

Simple in theory, but not necessarily in practice. A leash law works—to a point—when it is enforced. However, enforcement officers tend to be few and far between, and busy with other duties. They are also easy to spot. Many dog walkers simply carry the leash and let their dog run—until they see a patrol agent, at which point they snap the leash to the collar. Dog owners have also organized into intensely vocal advocacy groups, and they carry some political clout. (See *Coast & Ocean*, Summer 1998, on the dog and plover battle in San Francisco.)

No one has found a way to persuade plovers to nest in safer places. But humans, at least, can learn and adapt. At Half Moon Bay, a local action group, Plover Watch, walks the beach beat, on the lookout for people—and canines—straying too close to plover nests. Volunteer Bill Lauenroth notes that when Plover Watch started six years ago, many dog owners became enraged, even abusive, at the idea of leashing their pets. “We had to learn how to interact with them,” he said. “The friendly approach is

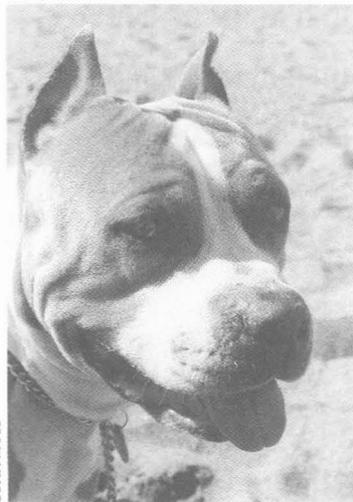
Boardwalk over the marsh at Coyote Hills allows for quiet observation without disturbing the residents.

How can we protect endangered birds that know no better than to nest on popular beaches?



Top: The Deo family from Long Beach pose for a picture while standing on the bluff above a beach covered with elephant seals near San Simeon Point. They obeyed the signs and stayed off the beach where the seals rest.

Bottom: Dogs don't have to chase birds. Whether they do depends on the owner.



the best. We carry dog biscuits for the pooches, tell people their dogs are the cutest we've ever seen, then slip in the information about the plovers. Most respond pretty positively." The 10 percent or so who don't, get to have a little chat with a state park ranger and are issued a \$50–75 citation.

"The reason we have to be so rigorous in protecting these remaining [bird] populations is habitat loss," says Brian Collins, wildlife biologist with the San Diego National Wildlife Refuges. "Often this [an urban beach] is the last bit of land they can make it on."

Yet habitat is scarce not only for these little birds. A group of human beach users also feels it has been pushed as far as it should be required to go: off-road vehicle users, who these days are permitted on just six of California's 1,200 miles of beach—five at Oceano in central California, and a small stretch near Eureka. The Oceano Dunes State Vehicular Recreation Area is home to plovers, as well as to endangered least terns, which also nest out in the open on dunes. During nesting season, enclosures are erected, and protective guidelines are publicized among off-road vehicle riders: there is a 15 mph speed limit, with birds to be given the right of way; drivers are to "drive with care" to avoid small chicks, especially on the beach at night; posted enclosures are not to be entered, and camping and parking are prohibited within 50 feet; dogs are to be kept leashed at all times; and trash is to be properly disposed of to avoid attracting predators. Will a balance be effected? Only time will tell.

Elephant Seals Claim Beaches

THERE ARE TIMES, HOWEVER, when we humans have little choice but to step aside and give animals their space. Take northern elephant seals, as one rather humongous example. Hunted nearly to extinction in the 1800s, they have made a spectacular recovery and have proceeded to reclaim their territory. In the early 1970s they began breeding on Año Nuevo Island in San Mateo County, and within a few years had spread to the mainland. The Año Nuevo colony has since then grown to over 7,000 individuals, and the site has been designated a State Research Reserve. Each year, tens of thousands of people visit on docent-led tours that keep humans at a safe distance. Reservations are required.

Quite different is the situation with an elephant seal colony farther south. In San Luis Obispo County near San Simeon, where these ocean giants have taken over two sites on Hearst Corporation property, crowd control is far more difficult than at Año Nuevo. Since 1992—only nine years ago—when the first 70-pound pup was born on a small pocket beach south of Piedras Blancas lighthouse, the breeding colony there has grown to at least 5,000 seals. "They don't care if a beach is used by humans," according to D. Barker, a biologist who lives nearby. "The beaches of Piedras Blancas were packed with campers, fishermen, divers, windsurfers, dogs, et cetera when the seals came in."

Highway One runs close to the shore here, and seals loll about within plain sight, even on the shoulder of the highway. Not surprisingly, they are an irresistible attraction. Drivers (many en route to Hearst Castle) pull over, and people "wander onto the beach and walk casually between groups of these massive animals," says Milos Radakovich, director of Bay Net, an organization of volunteer interpreters sponsored by the Centers for Marine Education. "Some even bring a chair, cooler, radio, and a favorite book, setting up a human island in a sea of seals. A few have even been observed placing their toddlers on top of sleeping bulls, for that 'Kodak moment,'" or they've "poked and kicked sleeping animals, just to put a little action in their photos, agitating them and, at

times, causing moms and pups to become separated." As Carol Teraoka, an enforcement officer for the Monterey Bay National Marine Sanctuary, comments, "people liken it to what they've seen at Sea World and other arenas; they forget that they're wild animals."

In the late 1990s, seals selected the nearby shoreline of Arroyo Laguna as a good place to haul out and go about the business of breeding. Spring 2000 saw tremendous activity, with 70 pups born by February 14—a tenfold increase over the previous year. Naturally, people wanted to feast their eyes on this remarkable sight, and hundreds proceeded to park unsafely, hop the barbed-wire fence or gate, and then tramp across the soggy, fragile meadow, again getting far too close to the huge beasts.

Solutions to these problems are in a way similar to those implemented for the plover—but different. Since elephant seals are relatively immune to the presence of humans (their future doesn't depend on being invisible, after all), we *can* get close to them. But if people come so close as to cause a change in the animals' behavior, they endanger themselves and may do harm to the seals. An adult seal might respond by lumbering right over a pup, crushing it; a pup could be separated from its mother; a pregnant female or new mother might be frightened and fail to return the next year. (Approaching any marine mammal too closely is a violation of the Marine Mammal Act, in any case. If you are less than 100 feet from an elephant seal, you are too close.)

To safeguard against "up-close and personal" contact, docent programs are in place at accessible spots where elephant seals are to be found: Point Reyes National Seashore, Año Nuevo State Research Reserve, and Piedras Blancas. At well-situated viewing spots on bluffs above seal rookeries, volunteers offer views through spotting scopes, provide information about the animals, and dispense tips for safe viewing.

Friends of the Elephant Seal (FES), formed in November 1997 and based in San Simeon, has been at the forefront of volunteerism in this regard. Virtually every day, year-round, 100 docents go out on three-hour shifts from about 10 in the morning until dusk, rain or shine, to talk to visitors from all over the world. "Last year," says executive director Susan McDonald, "we talked to about 75,000 people just at the Piedras Blancas site." And people are very

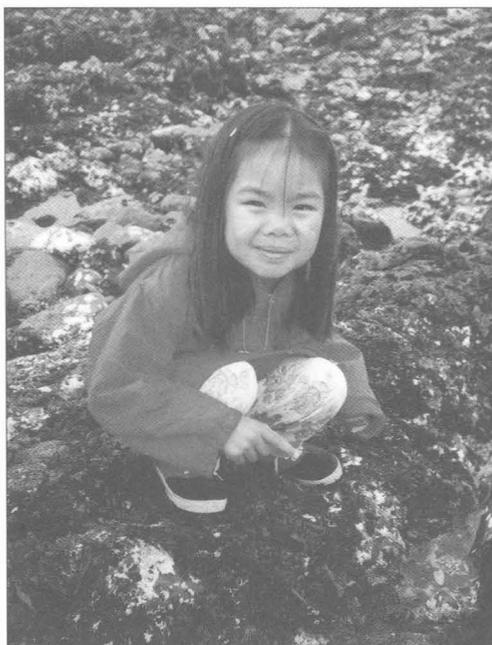
responsive, she says. "We've had some run-ins with drunks and people with attitudes, but 99 percent of the people, if we ask them not to get so close, say, 'Oh, I'm sorry, I didn't know.' And the people then educate other people: we see them on the bluffs explaining to strangers why we need to keep our distance."

FES is currently trying to set up a program with a small contingent of docents at Arroyo Laguna. "It's a bit of a sacred cow," says McDonald, "because it's an area the public has used for a long time, especially surfers and windsurfers, and it's very visible from the road. We've talked with the Hearst Corporation about doing something very low key." Three FES volunteers, windsurfers who know the spot well, are willing to go on weekends and chat with people informally. And the problem, McDonald says, isn't going to go away; it will only grow. "As rookeries get more crowded, they're going to be spreading out. The question is: How can we allow the public to enjoy this incredible phenomenon but also respect the animals? Can we coexist?"

"People liken it to what they've seen at Sea World; they forget that they're wild animals."

Too Many Small Feet?

EVEN WHEN PEOPLE have the best intentions, if there are too many of us, not just individual creatures but entire habitats may be harmed.



USHA MOSS

A San Francisco pre-schooler on a field trip to the Fitzgerald Marine Reserve





Top: A hawk! A hawk!

Bottom: Brown pelicans took off from a floating pipe near Oceanside.

Opposite top: So many little hands touch the anemones.

Have you ever been to the shore at low tide and hopped onto a coarse sand-covered rock, only to feel something go squish under your feet? Looking closer, you see that the “coarse sand” is actually bits of broken up shells, arranged in a discrete pattern of blobby disks with indentations in the middle. Well-camouflaged aggregating sea anemones. Oops.

And those are just the biggest, most obvious critters that encrust the high intertidal zone. Myriad worms, snails, crabs, urchins, bryozoans, tunicates, sponges, and other invertebrates, not to mention seaweeds and a few hardy fish, live in the harsh intertidal habitat of the rocky shore—myriad organisms adapted to wave surge and periodic drought. But not to lumbering humans.

Every week, busloads of school children arrive at the James V. Fitzgerald Marine

Reserve in San Mateo County ready to learn about and appreciate life in the intertidal zone. Yet how many is too many for the delicate ecosystem of the rocky reef? A long-term study of the impact of this wear and tear is under way. In April 1994 three 100-square-meter plots were roped off to allow recovery, and have subsequently been compared with control plots where access is still permitted.

Bob Breen, a naturalist at the reserve since its inception in 1969, says that species diversity in the roped-off areas is significantly higher: seaweeds, mosses, and algae are about twice as abundant as in the trampled areas. Not a big surprise. However, recovery has not occurred across the board: “the best recovery has been in sea anemones and black turban snails—species that were numerous anyway.” Some of the more rare forms of animal life, such as kelp crabs, ribbon worms, and sea slugs, are proving slow to regenerate. And both areas continue to change, “negatively in areas affected by humans, positively in the study areas. There’s a significant difference in the number of species present, of both plants and animals. We thought it would take six to 12 months for these things to grow back,” Breen says, but the first real differences weren’t seen until a good two years into the study.

Now, after almost seven years, the slow recovery has led reserve naturalists to conclude that closure of larger areas will be the best solution. Breen would like to see half of the reef closed off for a minimum of ten years, with subsequent rotating closures. Because this is a state reserve, however, such a step would require legislation that



JOLENE THOMPSON





USHA MOSS

may run into public opposition. "We've had complaints just about the three small areas that have been closed off," says Breen. "At present, all we can do is tell people they can't remove anything."

Even the taking of souvenirs can be difficult to monitor. In December 2000, a first-of-its-kind enforcement program to protect tide pools from poachers and casual visitors went into effect at Dana Point Marine Life Refuge in Orange County. Taking marine life now incurs fines of up to \$1,000 and up to a year in jail—be it abalone, mussels, or just a shell that is taken.

The Ocean Institute, a local marine research facility, is in charge of training the county sheriff's deputies who enforce this program. "We have to start looking at the bigger picture," says Jon Lewengrub, marine life manager at the Institute. "If people take the shells and animals out of the tide pools, we not only lose the tidewater organisms, we lose the bigger life forms that feed on them. What's at stake here is the future of the coast."

In 1998, the tide pools at Point Piños on the Monterey Peninsula became the focus of controversy when local resident James Willoughby launched a one-man crusade to halt what he believes is their unrelenting destruction. He blames uncontrolled access by school children who pick up marine organisms, then drop them where they may not survive; fishermen collecting bait; families foraging for food; and even the Mon-

terey Bay Aquarium, which collects specimens for display in its exhibits.

Aquarium scientists counter that changes in the diversity and quantity of marine animals can also be explained by other factors, including the gradual warming of sea surface temperatures and the efficient foraging techniques of the southern sea otter. Nevertheless, in October 1999, responding to a citizens' initiative spearheaded by Willoughby, the Aquarium agreed to stop collecting specimens from the Point Piños tide pools, to "eliminate the perception that we are acting only in our own self-interest," as Chris Harrold, director of conservation for the Aquarium, puts it.

Although Willoughby and others might like to see the tide pools placed completely off-limits to trampling feet and prying fingers, that simply isn't possible. A partial remedy does exist, however—one we've seen applied in the case of the snowy plover and the elephant seal: on-the-spot education. In Monterey, Bay Net is working to inform school groups, folks on bus tours, and casual visitors about appropriate behavior.

"Part of our training is how to approach people who are doing something inappropriate but not necessarily malicious," says Milos Radakovich. "The key is to approach them with a smile and a 'hi' and say, 'You probably don't know, but . . .' It's human interaction at a time and place where people are primed to absorb the information, when they're out there in the habitat itself. We call that 'actual reality.'" Bay Net volunteers hand out cards that inform visitors about intertidal life and list five reasons not to feed wildlife. Several signs have been placed in the area as well, in English, Spanish, and Vietnamese, suggesting proper rocky shore etiquette.

Many Simply Don't Know

JUST HOW MANY PEOPLE are out there clamoring for access to areas that might be better left alone, or at least trod upon lightly in designated areas?

Plenty, it would seem. Not only that, but the access these folks desire can be for wildly different purposes, with wildly dif-

Least terns mating on the beach



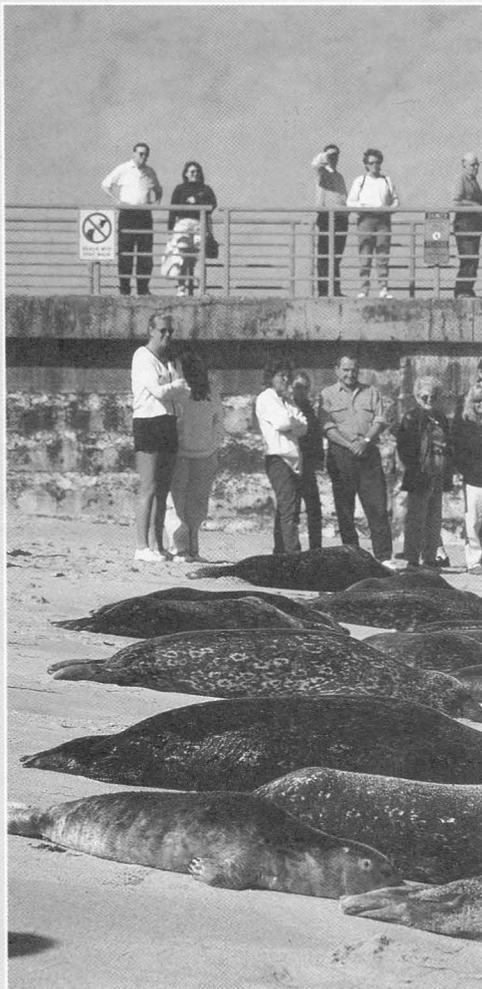
PETER KNAPP



Three years ago, when groups of harbor seals began to lounge—and poop—on La Jolla's Children's Cove beach, the City Council considered ways to drive them away: remove most of the sand? float shark-fin buoys or blow-up orcas off shore? In 1999, the Council voted to yield the beach. A rope barrier was erected to protect seals and people from each other, and Friends of the Seal, a local nonprofit group, was formed to train volunteer docents.

Now Children's Cove gets more than 80,000 visitors a month—"more than visit nearby Steven Birch Aquarium," says the Friends' Patrick Lee Ford. Docents are on the job weekends and some weekdays, to offer information and answer questions, such as "When do you feed them?" (Many are surprised at the answer.)

Unlike most harbor seals, these don't seem to mind humans as close as 25 feet away, says Ford. Nine pups were born on the beach last year. This year, after a TV station reported a birth around Valentine's Day, 9,000 people showed up in one day. "The future of our coast depends on this kind of direct experience," says Ford.



Before the rope barrier was built



PHOTOS BY DON BALCH

ferent potential impacts. Becky Christiansen of the Elkhorn Slough Estuarine Reserve in Monterey County comments, "You should hear all the things people want to do [at the slough]—mountain biking, hang gliding, model airplanes, horseback riding. The pressure, especially with mounting population, is amazing. We're just seen as a big park." Mike Wolder of the Sacramento National Wildlife Refuge Complex drives home the point that each recreational activity is an additive phenomenon: wildlife viewing, hunting, a walking trail—each on its own may have a minimal impact, but when you put those activities together in a small area, problems are compounded.

At the same time, says Brady Phillips of the Monterey Bay National Marine Sanctuary, "it's important for people to have opportunities to view wildlife in their habitats." Wildlife biologist Bob Garrison, who recently left the California Department of Fish and Game (DFG) to become an independent consultant in biological assessment and program and site development, agrees: "If you try to shut the lands down, in the long run you won't get the constituency that wants to protect the wildlife. It's important to nurture a respect and care for the wilderness, and an understanding of why we as a species need to protect other species."

You might think that folks seeking an up-close-and-personal encounter with wildlife would have the least impact. To a large degree that is true. Most of these recreationists appreciate nature and respect guidelines for responsible wildlife viewing (see the inside back cover). Although occasionally wildlife lovers do consider themselves "privileged"—that old "they don't mean *me*" response to a sign requesting people to stay out of an area where birds are nesting or resting—most people who overstep boundaries, managers agree, do so unintentionally. "Most of the public," says Brian Collins, "once they understand what the game is, are either completely on our side or at least compliant."

For example, it's not intuitively obvious that it might be bad for birds to fly. They have wings, after all! At certain times of the year, however, especially during winter migration, they need to rest, first and foremost, and feed; after a several-thousand-mile journey, any unnecessary flight can be their undoing. Flushing birds to make them fly for a photographic opportunity or simply for the pleasure of seeing hundreds,

even thousands, of birds in flight can cause birds to become separated from their family groups, send them into hunting areas, or put them at risk of predation.

On Alcatraz Island in San Francisco Bay, for example, numerous seabirds nest along the Agave Trail—western gulls predominantly, but also brants, pelagic cormorants, black-crowned night herons, black oystercatchers, and pigeon guillemots. Alan Hopkins, president of the Golden Gate Audubon Society, points out that “if people disturb the western gulls, they all go up at once and disturb all the other birds, and when the birds leave their nests, that opens the nests up to predation—by the gulls.”

It’s similar for our friends the snowy plovers: if flushed from their nests, they may abandon their eggs, judging the riskiness of the site as too high, or the short-term absence from the nest may render the young vulnerable to cold air or predation by crows. When wildlife viewers are confronted with such facts, they often find ways to tread more lightly on the land, a bit farther from the objects of their affection.

Design Solutions

A LONG WITH PUBLIC EDUCATION and enforcement, thoughtful design can mitigate, if not resolve, access-wildlife conflicts. At the Sacramento Wildlife Refuge, a new system was instituted last year for public viewing of the vast numbers of wintering waterfowl. Denise Dachner, outdoor recreation planner at the refuge, says that in the 13 years she has been there, visitation has doubled, “and that means more pressure, more disturbance on wildlife. In the past, we allowed people to get out of their cars wherever they wanted, but more and more people were getting out and walking, exercising dogs, even throwing rocks in the water and at the birds.”

In response, refuge managers improved the auto tour: they regraded the dirt roadway, created 24 turnouts, and established two “park and stretch” stops with viewing platforms and restrooms. Cartoonlike signs have been erected all along the road asking people to stay in their cars except at the park-and-stretch areas, and an FM-radio audio tour created by a local Eagle Scout presents facts about the refuge. Viewing lanes have been mowed along the road,



JOLENE THOMPSON

and bird islands have been built far enough away from the road for the birds to feel safe.

Public response has been mixed, says Dachner. About half the visitors, especially new ones, have been respecting the signs. “But change is tough. It’s hard to explain when people who have been coming for years ask, ‘How can you do that when half a mile away you have hunting?’ And some people feel very put upon if you even say anything about getting back in their vehicles. We’re trying to do it softly; when the opportunity is there for education, we do that.”

Ultimately, Dachner says, “I’d like this place to be a Galápagos II. The Galápagos is the only place in the world where you’re part of the ecosystem. You stay on the trails, in designated areas, and the wildlife stays in its designated areas. As a result, you can walk down a path that’s 10 feet away from a nest—because they’ve learned. They know you’re not going to be walking off the trail, and that they’re safe.”

Many people who come to parks and beaches, however, have little interest in wildlife. Sure, they enjoy sighting a deer, or a flock of feeding birds, but that’s not why they’re there. They’re there to have fun. But mountain bikers, equestrians, and large groups of lug-soled hikers need not be disruptive of wildlife. The key is good trail location and design—and human adaptation, where necessary. Bicyclists, for instance, “are going from point A to point B on formalized trails,” explains Steve Fiala, trails specialist for the East Bay Regional Park District. “That makes them pretty undistruptive, assuming the trails

Seals lolled on a floating pipe that was used to pump sand to the beach south of the Oceanside Pier in San Diego County in 1998.





Top: Peaceful coexistence at Morro Strand State Beach

Bottom: Black-crowned night heron



ROLAND AND KAREN MUSCHENETZ

are well situated." He mentions a trail that had been planned to skirt an area where a golden eagle had started nesting, but was realigned downslope and out of the eagle's plane of vision. The eagle remained undisturbed, and people could hike and bike to their hearts' content.

Also, Fiala says, "many of the species we see are adaptive and can become comfortable with public presence. Clapper rail populations in some of our shoreline areas have increased even in the presence of trails." Garrison makes a similar point about the Upper Newport Bay Ecological Reserve in Newport Beach, which is "totally surrounded by people. There's a driving loop and walking trails, and you can get very, very close. There's such limited habitat that the animals and birds have managed to adapt."

Humans engaged in recreational activities coexist with wildlife not only on land but also on and under water and in the air. Kayakers often get too close to marine mammals—especially otters, but also sea lions and harbor seals. Just as people think it's okay to make birds fly, they often think that otters are *meant* to swim, so what's the problem? They don't realize that otters spend almost half their time resting. By making them constantly react to boats, kayakers endanger their health.

Even folks taking to the skies can be a problem to other creatures. As I spoke with Brian Collins, he observed a blimp approaching along the shoreline, some 50 feet off the ground. About a minute later he commented, "Yep, there go the birds."

Carol Teraoka said that at specific times of year, certain seabird colonies need a broader buffer zone from overflights. "Usually it just takes a reminder, maybe you just need to swing wide just for a little while. Pilots are pretty cooperative."

The key to making wildlife and recreation compatible—a point echoed by all the managers, wildlife biologists, interpreters, and enforcement officers I spoke with—is balance. Those who manage parks and public lands must understand and consider the needs both of wildlife and of people who come for recreation. They must consider the potentials and limitations of specific sites to support these needs, and make decisions accordingly. More and more, resource managers will have to perform a balancing act, compromising here, drawing the line there. For years to come, many decisions will necessarily be seat-of-the-pants, based on experience and best guesses, as well as on agency mandates. Can we coexist? Well . . . it depends. Though I will say, the signs *are* encouraging. ■

Anne Canright is a contributing editor of California Coast & Ocean.



KEN GARDINER

Brant on Morro Bay

RUTH ANN ANGUS

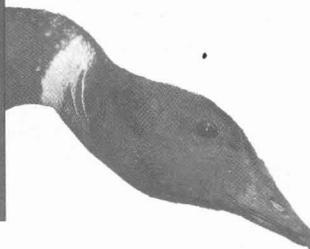
IT IS 8:00 ON A DREARY WINTER morning, and I am slogging across the salt marsh trying to keep up with John Roser as we set out in search of brant geese. He's wearing hip waders and carrying a scope, mounted on a tripod. He'll use it to read the characters on the colored leg bands that some of the geese wear. I am skeptical.

"The geese are banded with nine different colors, based on where they came from," Roser tells me. Yellow, for example, identifies birds banded in the Yukon-Kuskokwim Delta in western Alaska. Fishing in a pocket of his jacket, he pulls out a cylindrical piece of bright yellow plastic, about an inch long, with large black lettering. Novice though I am at this, I can see that it's a larger band than the tiny metal kind generally used to band birds.

TOP PHOTO BY JOHN ROSER



RUTH ANN ANGUS



We spot a group of several hundred geese resting on the water just north of the mouth of Chorro Creek, which feeds into Morro Bay not far from the marina entrance. Roser says, "We'll go over by the creek and slowly come up closer to them."

"How close do we have to be to see the bands?" I ask.

"Oh, we can't get too close."

Suddenly the flock starts to paddle rapidly southward, away from us. A motorized dinghy is coming from the marina area, speeding straight for the geese. We stop in our tracks in disbelief. "Oh no!" Roser exclaims.

The boat keeps coming, and to our dismay, the entire flock takes flight. John has set the tripod down and is peering through the scope. "They have guns," he reports. "I thought hunting season was over."

The boat and the people in it are in full camouflage. From behind a screen similar to a duck blind, two individuals stand up and point their rifles at the fleeing birds. But there's no sound of a shot, and after a few minutes the boat motors off again. Mystified, we return to the day's task, which has now been made more difficult.

On the other side of the creek a few brant still linger. Roser sets down the scope beside the mud flat, looks through it, then consults a printed list of numbers he has brought with him. "Take a look," he says. "You should be able to see the band with the numbers. They'll be backwards."

"Oh, great! Why backwards?"

"It has to do with the mirrors in the scope. Some cameras work that way too."

I peer through the tiny viewfinder, and lo and behold, there it is, a yellow band with a black number, Y6V7—only backwards. Roser's records identify the goose as one that was seen in previous seasons and is back with its mate.

We spend about an hour searching and finding more banded geese, record what we saw, then head back to Roser's car.

This was a more or less typical winter morning for Roser. From the last week of October through April, he goes out to the bay four days a week to record leg bands and make other observations. He also does weekly population counts and keeps track of juvenile/adult ratios. His wife suffers through this season. "Other wives are Monday night football widows, Carol is a brant widow," he says. "Maybe I'm nuts, but I love doing this, and every day I learn new things about brant."

Crowding the Brant

THE BRANT STUDY is strictly a volunteer activity for John Roser. He works full time as a naturalist with Camp Keep, a program of the Kern County Superintendent of Schools, at Montaña de Oro State Park, just up the road from the small town of Los Osos. "When I moved from Atascadero to Los Osos, I wanted to do some kind of field work to help with the conservation of this incredible area," he explains.

His interest in brant geese was sparked by some contentious community meetings about hunting. Waterfowl hunting is allowed on Morro Bay, and about 200 brant are taken each year during the season between November 10 and December 9 [dates are set annually]. But opposition has been growing, along with the area's human population.

Opponents argue that hunting is inappropriate on the bay, with 25,000 people living in the two towns on its shores, Morro Bay and Los Osos. The sound of gunfire bothers some residents, and recreational boaters worry about stray shot. Conservationists also point out that Morro Bay is the last significant area in southern California where these long-distance migrants can stop or overwinter.

Hunters and their supporters, on the other hand, say that hunting is a long-time tradition in this area and deny that there are conflicts. Gunfire noise is no worse than the din of early morning garbage collection, they say, and stray shot is not a problem because nobody has yet been hit.

"During the hunting meetings," says Roser, "I began learning about brant and

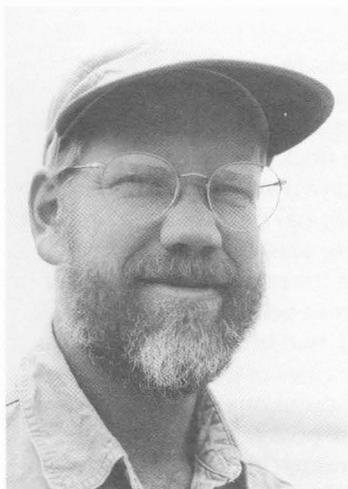
was surprised to learn that nobody was doing even the most basic monitoring of this population. I had assumed that the Department of Fish and Game had data since they maintained a hunting season on the species. When I learned they didn't, I decided to get involved."

Black brant are the smallest of the geese migrating along the Pacific Flyway. Each autumn they leave their arctic nesting grounds and the entire population of 150,000 gathers at Izembek Lagoon in western Alaska, where they prepare for their southward journey by feeding in the rich eelgrass beds. In late October or early November, when the storms are right, the birds rise toward the sky and fly nonstop for 60 to 75 hours, as far as 3,000 miles. About 80 percent of the population winters in Baja California; others stay in estuaries along the West Coast as far north as British Columbia. Lately, however, large numbers have begun to winter at Izembek Lagoon; no one knows why, says Roser.

On Morro Bay, the winter population was declining. In the 1960s the Department of Fish and Game tallied 6,000 to 8,000 birds. Nowadays counts fluctuate around 3,000, dropping even further when heavy rainstorms send huge loads of silt into the bay, killing underwater vegetation, including eelgrass, the primary food for these geese. It grows in sheltered bays and requires clear, clean water.

Roser figured that by learning more about the brant that spend time on Morro Bay, he could help to support them locally while also contributing to conservation efforts that span the continent. The information he gathers is passed along to David Ward of the U.S. Geological Survey, who conducts scientific studies of brant in wintering sites in Mexico and manages a Flywaywide database of brant banded in Russia, Alaska, and Canada.

Besides counting banded brant, Roser is also looking at how the geese use the estuary's habitats and regions and how some human uses of the bay affect them. To digest eelgrass, for example, the geese need to ingest sandy grit. He has found that they fulfill this need in three main areas. One is in the midbay, near a marina where canoes and kayaks come and go; another is in Los Osos, on a shoreline that is backed by a residential neighborhood and is popular with dog walkers; the third is near the city of Morro Bay. In each, the birds are frequently disturbed. During hunting season, when



John Roser

they are especially sensitive to boats, they abandon the area near the Morro Bay waterfront.

"Hunting is the largest source of disturbance to the brant on Morro Bay," Roser said. "However, growing recreational uses present threats that could someday force them to abandon the bay, if current trends continue with no effective management." Kayaking has developed into a major tourist attraction. Windsurfers are appearing with greater frequency. Time and again, the birds are flushed and dispersed by people moving directly toward and through their flocks; this causes them to use energy to flee at a time when they need to forage and rest. Nevertheless, "there are no guidelines, no plans in place to regulate these activities in these sensitive areas," Roser says. "A great deal of effort is being put into maintaining a healthy watershed and estuary, but if we aren't careful, I believe we may be in a position a few decades from now where we have preserved the habitat but have pushed out some of the migratory wildlife."

This opinion is shared by the Pacific Flyway Management Plan for Pacific Brant, which states: "In populous sections of the coast south of Alaska, people may simply crowd out the brant, leaving the eelgrass intact. This may have already occurred in California and elsewhere as human use of some bays grows more intense."

Learning Manners

AFTER COMPLETING his observations this particular day, Roser decides to call the Department of Fish and Game to check on that camouflaged boat we had seen. So we trudge up to the Morro Bay State Park Museum of Natural History to use the phone. It turns out that hunting season has indeed ended, but this particular day is Youth Hunting Day, sponsored by the Department to encourage young people 16 years and under to take up hunting.

"I hope you registered a complaint about their behavior," I say. Roser just shakes his head. "I'm not necessarily opposed to hunting," he responds, "but I am disturbed by some of the practices that some of the hunters employ."

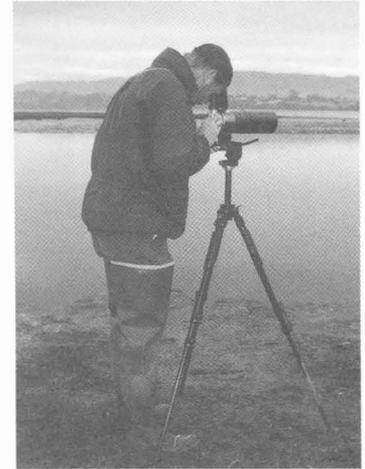
"Like what?"

"Sculling, for instance. That's where a hunter uses a special boat that he is supposed to manually maneuver up to and through a flock of birds. Sometimes sculling causes entire groups of brant to fly off the bay and go out and sit on the ocean until dusk. So instead of being able to feed, grit, and rest on bay waters, they are forced to waste energy bobbing around out in the open ocean all day." Decoy hunting causes far less disturbance to the population than sculling.

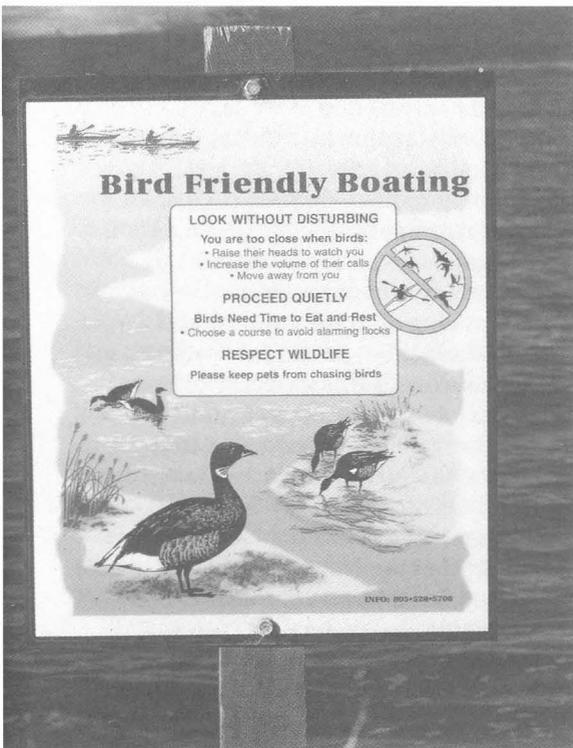
Aware that disturbance to brant is increasing along with human uses of the bay, Roser has joined the board of Friends of the Estuary, which is spearheading a campaign to educate the public about ways to enjoy the bay with as little intrusion on wildlife as possible. Measures being considered include signs to tell people about brant and how to behave properly around them.

Thanks to Roser's efforts, and the work of other volunteers who pitch in to protect what they love, these long-distance travelers may continue to find a friendly place to rest and eat on Morro Bay. And our imaginations can continue to soar as we consider their remarkable travels. ■

Ruth Ann Angus photographs and writes about nature, wildlife, and agriculture for national magazines and local newspapers, edits environmental newsletters, and plans nature tours. She lives in Morro Bay.



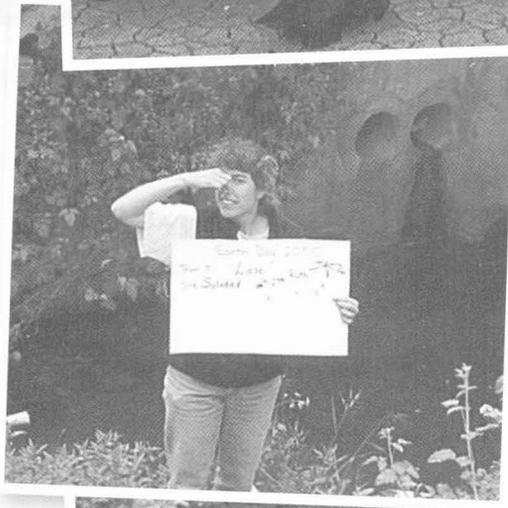
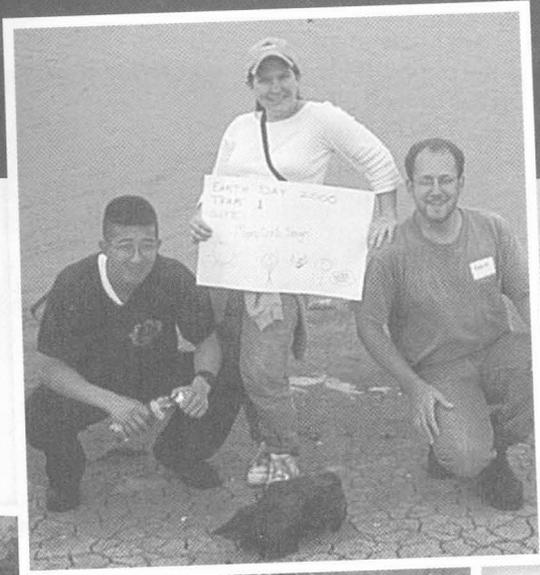
John Roser on a typical winter morning



PHOTOS THIS SPREAD: RUTH ANN ANGUS

Monterey Bay Snapshot Day

KAITILIN GAFFNEY



PHOTOS THIS SPREAD: MBNMS CITIZEN VOLUNTEER MONITORING NETWORK



ON APRIL 22, 2000, the Monterey Bay National Marine Sanctuary (MBNMS) celebrated the 30th anniversary of Earth Day with "Snapshot Day 2000"—a one-day, Sanctuary-wide volunteer water quality monitoring event. In the course of the morning and early afternoon, 120 trained volunteers waded into creeks, streams, rivers, sloughs, estuaries, and surf throughout San Mateo, Santa Cruz, Monterey, and San Luis Obispo Counties to test water quality and take a "snapshot" of the condition of the Sanctuary's watersheds.

Designed to increase public awareness of water quality issues affecting Sanctuary watersheds, Snapshot Day 2000 also emphasized the key role volunteers play in water quality monitoring. Faced with budget and staffing limitations, government agencies monitor fewer than 10 percent of California's rivers and streams, and funding for water quality testing has decreased dramatically over the past decade. Responding to this problem, citizen volunteers from around the state have begun filling the gaps in water quality data by testing local watersheds themselves.

Recognizing both the value of and the increased potential for citizen watershed monitoring on California's central coast, in 1999 the Coastal Watershed Council, the Center for Marine Conservation, and the Monterey Bay National Marine Sanctuary founded the Monterey Bay Sanctuary Citizen Watershed Monitoring Network. The overall goal of the Network is to help create integrated, long-term, volunteer-based water quality and watershed monitoring within the Monterey Bay Sanctuary and its watersheds and to make these citizen monitoring programs an integral component of

watershed stewardship and Sanctuary education and management. Snapshot Day 2000 was sponsored by the Network.

Although similar large-scale events have been held in other parts of the country, Snapshot Day 2000 was the single largest water quality monitoring event in California history. Testing occurred at 122 different sites on 89 water bodies spanning nearly 300 miles of California's coastline, including four counties and ten of the Sanctuary's eleven major watersheds. Volunteers recorded water temperature, dissolved oxygen (DO), conductivity, turbidity, and acidity/alkalinity (pH). Selected sites were also tested for nitrates, phosphates, and fecal coliform bacteria. These water quality "parameters" help to identify the general health of a body of water, potential threats to fish and other aquatic organisms, whether the water is safe for human contact, and potential sources of water quality problems.

"This event draws attention to the vital role citizen volunteers play in protecting the Sanctuary's waters," said William Douros, Sanctuary superintendent. "We hope that Monterey Bay Snapshot Day will help inspire new volunteers to assist in year-round efforts to monitor water bodies and teach individuals the critical role they can play in protecting the health of their local waters through their own actions."

The data collected on Snapshot Day 2000 reinforced previous findings that some of the Monterey Bay Sanctuary's watersheds face water quality problems. One-third of the sites tested for fecal coliform bacteria exceeded levels considered safe for bodily contact. The fecal coliform bacteria count at one site in San Mateo County was nearly 60 times the level considered safe for swimming. Several rivers, creeks, and sloughs in Monterey County had high nutrient levels, most likely from excess fertilizer and manure draining off the agricultural fields of Elkhorn Slough and Salinas Valley. One site in urban Pacific Grove also tested high for nutrients. Some of the water bodies tested had dissolved oxygen levels too low to support steelhead trout migration. The full Snapshot Day 2000 Report is available on the Sanctuary's website at: www.bonita.mbnms.nos.noaa.gov.

Data from one day of monitoring is not enough to assess the water quality of a sample site, a stream, or a watershed. Meaningful interpretation of data requires years of

regular sampling and must take into account variables such as time of day, seasonal changes, and other factors. However, it is clear from existing monitoring efforts throughout the region that urban runoff, agricultural runoff, wetland and riparian degradation, and point source pollution are all impacting the Sanctuary's watersheds. Over the past five years, the Sanctuary, working cooperatively with other agencies as well as local citizens and community organizations, has developed action plans to begin to address some of the most pressing water quality issues in the area, including urban and agricultural runoff.

"Over the coming years, we hope and expect that implementation of the Sanctuary's water quality protection action plans will significantly reduce the pollution entering area watersheds and improve water quality," said Linda Sheehan, Pacific region director of the Center for Marine Conservation.

With the help of funding from the Central Coast Regional Water Quality Control Board, the City of Pacific Grove, and the Coastal Commission, the Sanctuary recently hired a Network coordinator to work with local citizens and community organizations to refine monitoring methods and ensure a standard level of quality for regional citizen monitoring results. As it continues to develop and grow, the Network will provide a template for other regions throughout coastal California. For more information on the Network or to participate in the Second Annual Snapshot Day, April 21, sign up for the Network Listserve: mbnms_volmonet@ragged.mbnms.nos.noaa.gov, or contact Bridget Hoover at (831) 647-4201. ■

Kaitilin Gaffney is the California Central Coast Program Director for the Center for Marine Conservation. She works out of the Monterey Bay Field office on the Santa Cruz Wharf and can be reached at kgaffney@psinet.com or (831) 425-1363.



Above: Testing the water at Natividad Creek

Opposite: Volunteers at (top to bottom) Moro Cojo Slough, Soledad and Soquel Creeks

Hot Coastal Stew

THE HCP INGREDIENT

RASA GUSTAITIS

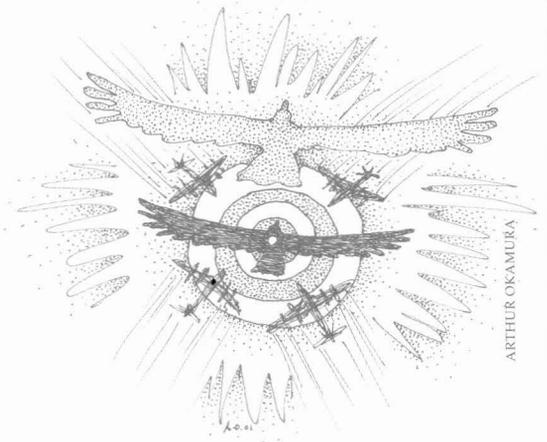
BUREAUCRATIC ALPHABET SOUP makes most people's eyes glaze over. A recent Coastal Commission fracas about HCPs, NCCPs, ITPs, the OCRM, and an MOU drew scant public attention, although it went all the way to Washington D.C. and alarmed many people involved in coastal conservation.

At issue was a challenge to the Commission's authority to participate in Habitat Conservation Plans (HCPs) and Natural Community Conservation Programs (NCCPs). When the drama ended on January 10, it appeared that ground had been neither gained nor lost, though perhaps some new pathways for resolving perceived conflicts were opened.

Last fall, the Commission tried to get federal approval for a "simple" procedural change in the regulatory permit process. It was meant to assure that the Commission could provide timely review, for consistency with California's coastal management program, of such HCPs and NCCPs as might affect coastal resources. This move was met with vehement opposition from the development and extraction industries. In the end, the Commission reluctantly backed down, at the strong suggestion of Secretary of Resources Mary D. Nichols, who brought bad news from Washington.

Fogged in by bureaucratic verbiage and obscured by wrangling over procedures, the flare-up was, in the view of the Commission's executive officer, Peter Douglas, and its chair, Sara Wan, the result of a major attack on the Commission's ability to carry out its mandate for protecting the coast.

Habitat conservation planning is a process intended to accommodate growth and development while also protecting endangered species (see Winter 1996-97 issue of *Coast & Ocean*). It allows for the destruction of some habitat, with "incidental take" of the listed species, in exchange



for setting up "reserves" of more sustainable habitat elsewhere for the same species.

An HCP is negotiated among local governments, landowners and developers, U.S. Fish and Wildlife Service (FWS), Department of Fish and Game (DFG), and other agencies. The FWS issues an Incidental Take Permit (ITP), which exempts the landowner from provisions of the federal Endangered Species Act on the specified property. Once an HCP is in place, federal law provides that the property owner is immune to further federal intervention on behalf of any endangered species covered.

HCPs are increasingly popular, as are Natural Community Conservation Programs (NCCPs), landscape-sized plans that take an ecosystem approach. They have support both in the development community and among conservationists, but critics fear they can become wolves in sheep's clothing. They are not meant to supplant existing laws but, without proper safeguards, could undermine them.

Was Wolf in Sheep's Clothing At Large?

TAKING NOTE OF "a new trend emerging in which NCCPs and HCPs are used to supersede Coastal Act habitat compliance," Douglas last September proposed a paper step to streamline the process and make sure the Commission was not blindsided or cut out.

The Commission was alerted by a plan of the City of Carlsbad, in northern San Diego County, for a municipal golf course extending into the coastal zone. It proposed to compensate for loss of coastal habitat by establishing a "reserve" that would extend outside the coastal zone. The Coastal Act does not permit such a trade-off. Commission staff had learned by reading the Federal Register that Carlsbad had applied for an ITP. The Commission stepped in to review the proposed ITP for consistency.

This was the first time the Commission was challenging an ITP for a habitat conservation plan. It has authority to review federal actions for consistency and routinely gets notice of 16 types of federal licenses and permits that it must certify as consistent.

The Commission may also review other federal permit and license activity that is "reasonably expected to affect the coastal zone." But that is a cumbersome process. It must notify federal agencies and project applicants, and ask approval from the Office of Coastal Resources Management (OCRM) of the National Oceanic and Atmospheric Administration (NOAA) in the Commerce Department. This the Commission had to do in the Carlsbad case. OCRM agreed.

Knowing that many more HCPs and NCCPs were in the works, Douglas proposed to ask that the ITPs be added to the list of 16 permits it routinely reviews. At least ten states have these permits listed, including Texas and Oregon, and OCRM indicated that the request was reasonable. The Commission invited public comment, anticipating no problems.

To everyone's surprise, a flood of opposition from development, extraction, and agricultural interests poured in to state and federal authorities, accusing the Commission of a power grab and asking that the OCRM extend the public comment period. On October 11, Secretary Nichols requested a delay, saying that she and Robert Hight, director of DFG, had "been contacted by various members of the public who have expressed great concern."

Congressmen Rob Packard, Duncan Hunter, Brian Bilbray, and Randy "Duke" Cunningham wrote to NOAA administrator James Baker warning that "the proposed change could be problematic for habitat conservation planning in our state."

Paper Tigers?

A MOVE THAT HAD SEEMED small and reasonable "took on a life of its own," as one commissioner put it. Soon the Commission and its allies began to see the stakes as being high. Most of the attention focused on its jurisdiction over activities outside the coastal zone that bear on coastal resources. These would include offshore oil leases outside the three-mile limit, mining leases, toll roads and development in upper watersheds.

The Commission has exercised its jurisdiction over such federal activities numerous times. It did so in the case of the Los Padres Dam on Carmel River, for example,

which is 16 miles inland from the coastal zone, because sand flow affects the coast. It recently entered the fray over the Navy's plan to practice bombing in Fort Hunter Liggett (see p. 2). It was not seeking to expand the authority it already had, yet that was the charge being levied against it.

Before year's end the Commission learned that its request for the ITP listing had been moved up to the level of the Secretary of Commerce, Norman Y. Mineta, and that it would not be granted unless it came from the State of California rather than just from the Commission. It was to come with a Memorandum of Understanding (MOU) among FWS, DFG, and the Commission on their mutual roles regarding the ITPs. Secretary Nichols undertook to broker this MOU.

The drama turned into a cliffhanger in the waning days of the Clinton Administration. On December 19, a marathon session was held in Nichols' office. When it ended, late at night, Douglas came away believing that the path had been cleared. But more surprises were in store.

By the time the Commission met in Los Angeles on January 10, ready to make its request to the OCRM, George W. Bush had chosen Mineta as Secretary of Transportation. Secretary Nichols advised the Commission it would be wise to "peremptorily withdraw the letter filed," rather than have the Commerce Department deny it. "We are in a different situation than when the item was put on the agenda," she explained.

In the end, after long and emotional discussion, the Commission voted 6-5 to table its request.

In a recent interview, Secretary Nichols said that much had been learned from this experience. She expected the habitat conservation planning process to improve as a result, and expected agencies involved in the process to work together. "The Coastal Commission is the final authority over the coastal zone," she said. "Commission staff needs to be included early on" in habitat conservation planning "in the coastal zone and beyond the coastal zone to the extent that there is a direct link to the coastal zone."

In perspective, this was the latest tug-of-war in the ongoing struggle to defend the Coastal Commission, which administers the toughest coastal protection law in the nation, against efforts to weaken its authority. There is enormous citizen support for the coast and direct challenges have often backfired. Bureaucratic tangles are much harder to see through, but may be just as significant. ■

Pacifica Pier Perils and Pleasures

KEVIN THATCHER

AS YOU BOMB INTO THE HORIZON heading south on Route 1 from San Francisco, the first thing you see after passing under the Skyline Boulevard overpass is Pacifica Pier. Even in the often present fog, the pier is usually visible, jutting out into the Pacific Ocean between cliffside mobile home parks to the north and humpbacked Mori Point to the south. The coastal vista leaves an imprint just as you regrip the steering wheel and drop into a four-lane subway that doesn't allow another sea view until Rockaway Beach several miles on.

Such is the layout of Pacifica, a place with a name that assures you never know quite where it's at (like Atlantis), even after you've passed right through it. Pacifica is actually made up of nine smaller 'burbs that were incorporated together in 1957 along the Pacific shore south of San Francisco. Edgemar, Pacific Manor, Sharp Park, Rockaway Beach, Vallemar, and the small crescent bay at Linda Mar are all framed to the south by the craggy spear of San Pedro Point jutting into the sea. Park Pacifica, in the hills east of the highway, is protected from offshore winds. Boasting a consistent and fair northwesterly swell, Linda Mar and Rockaway Beach harbor some of the last semi-undiscovered vestiges of a hardcore surf culture—evidenced by crusty and scowling locals that dominate the beach parking lots. Around here, if you're from more than a mile inland you're a "valley."

Despite the proliferation of professional hangers-out and layabouts along the surfing beaches, the real crab pot and crossroads of culture in the area is back up at the Pacifica Ocean Fishing Pier, at Sharp Park Beach.



Pacifica is predominantly a working class town, a mix of homeowners and renters, and Sharp Park is no exception. A ten-block grid of apartment buildings, duplexes, and single-family dwellings pushes right up to the exposed and crumbling shoreline cliffs. Almost everybody knows somebody who knew someone else who lived in a place that no longer sits right on the beach. Even with massive rock dumping and shoreline shoring over the past 30 years, every now and then during high surf a rogue wave will crest the wall and break down the street toward the 7-11.

Back in 1972 the state struck a deal with Pacifica to build a 1,140-foot public fishing pier astride an ocean outfall pipe from the City's new wastewater treatment plant. Grants from the Wildlife Conservation Board and the Department of Fish and Game paid for construction.

As the only ocean fishing pier in northern California, it quickly became famous far



PHOTOS THIS SPREAD BY KEVIN THATCHER



beyond Pacifica as *the* place to fish for salmon, perch, Dungeness crab, flounder, and other tasty species. People come from as far as Sacramento, San Jose, and even more distant places to cast their lines and drop their nets. One of the regulars during salmon season has been Frank Cuna, a retired policeman and Native Hawaiian from the Big Island.

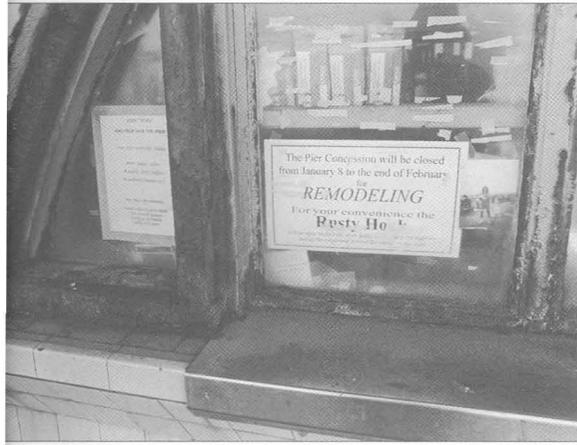
But the pier is on borrowed time. Although it's a massive reinforced-concrete structure designed to withstand the giant waves that hit Pacifica's beaches, it was built with a life expectancy of only 25 years. It may not withstand the next moderate earthquake or heavy storm. What's more, maintenance has been neglected since the City opened a new and more advanced wastewater treatment facility two miles south, at Calera Creek in Rockaway Beach, and state money to support the old outfall pipe dried up.

In 1998, an engineering assessment report

found that "deterioration of the structure has reached a point where immediate preventative measures must be taken to prolong the life of the pier." To extend its expected usefulness another 15-20 years, up to \$5 million must be pumped into retrofit work "as soon as possible." By now, an estimated \$7.5 million or more would be needed, according to Larry Beaver, the City's deputy public works director.

Thanks to efforts by Senator Jackie Speier, the California Legislature has come up with \$500,000, but that's just enough for emergency fixes and to develop engineering proposals for a repair strategy.

With two strikes against her and winter storms continuing to batter any chance of survival, support for the pier is growing among both the saltier Pacifica locals and the hordes of strollers and fisherpersons that heavily populate the structure daily, especially at sunset. Hundreds have signed petitions for help, and a local nonprofit has



been formed, POPS (Preserve Our Pier Supporters), dedicated to saving the pier from literally falling into the ocean. POPS held two free concerts last summer, sponsored a pier poetry contest, and baked cookies, to drum up memberships and raise funds. It has also appealed to state agencies, though so far there has been no response.

"This pier is free to everybody, and the parking is free

in Pacifica. We want to keep it that way," says POPS chair Anna Boothe. Cheryl Jimno, who manages the concession and bait shop with her husband, Joe, says, "Most regulars who come here day in and day out are retired, like part of a family; they talk and joke and look out for one another. People come down here to slow down." Meanwhile, underneath, heavy winter surf was gnawing a hole in the pier's steel and concrete bulkhead.

While angling for prime spots can get a little competitive, no state fishing license is required to fish off the pier. The vibe is usually mellow and friendly among the regulars and curious, clueless tourists. Fishing side by side are sport fisherman going for salmon and striped runs, and those who will collect anything for the stew pot, including small mussels scraped from the pilings. Crab net ropes and drop lines hang next to surf casters and elaborate jig rigs. Despite the devastating decline in our Pacific Ocean fishery, on Pacifica Pier there's plenty to go around when the season's on. When it's not, it's still a great place to stroll and hang out. All told, it's definitely worth saving.

On a recent gorgeous Sunday, when huge waves were breaking against the pier's octagonal pilings so hard that the whole structure was swaying (as it was designed to do), plenty of people were out enjoying the pier, among them Anna Boothe and POPS vice-chair Andy Pappas, trolling for the cause.

She's a poet and former member of the City Arts Commission, he's "King of Crab" because of a talent for bringing in the limit of Dungeness. For the past 30 years he has lived in a blufftop house west of the highway (you'll see its three flags: U.S., Greek, and San Francisco 49ers), but the pier is the place to look for him on days and nights

when the fishing is good. "I like to come out at 2:30 or 3 in the morning and stay till 11:30 or noon," he said. "I put up my tent, see the stars, talk to the Man Up There." He appreciates that quiet, but also the company at other times.

Walking on the pier this particular Sunday, Boothe and Pappas came upon Noel Olive of South San Francisco, out with his kids, Justine, 4, and Kevin, 2. There was no point in trying to fish today, the ocean was too rough, he and Pappas agreed. Another regular, Manny Sarmiento, was also there without his gear, all the way from Concord. He used to live in Pacifica but moved to Concord because "they were catching stripers there and not here. Now they're catching stripers here, but I can't afford to move back," he said. "I have fished off this pier since the day it opened," he continued, explaining: "I was born on an island, surrounded by water (in the Philippines)."

Two young men were fussing with new crab fishing gear. "I hope they don't lose it," said Pappas. "They won't catch anything today, but so what? They'll have fun." He stopped to pose for a photograph at his favorite spot, at pier's end, where it angles 90 degrees north for 200 feet to face the mighty Pacific head on. Then he and Boothe turned back. "This is our beautiful pier," said Boothe. "To see our poor pier you have to look underneath."

Meanwhile, Gabrielle Gray, 6, and her sister, Alexis, 4, were standing on a bench, entranced by rainbows in the ocean spray. They were here from San Diego, visiting their dad, Doug Gray, who was trying to catch a fish for their dinner.

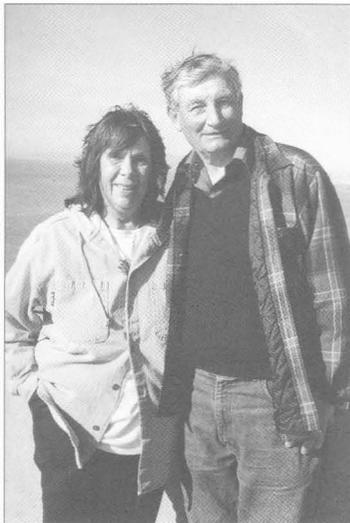
This was not a promising day for fishing, but you could see in just about every face how good it was to be out in the wind and the sun, swaying above the giant waves. Cheryl Jimno, Anna Boothe, and Andy Pappas know the future of their beloved pier is dubious. But they and all the others are hoping for the best. ■

Kevin Thatcher is the publisher of Thrasher skateboard magazine, Juxtapoz art magazine, and Schwing! golf magazine.

To visit Pacifica Pier, take the Sharp Park exit from Highway 1, continue on Paloma to Beach Boulevard.

POPS can be reached at: (650) 557-9097; 212 Second Avenue, Pacifica, CA 94044.

Anna Boothe and Andy Pappas



Bad Breaks AT NEW SURFING REEF

CHRISTINA S. JOHNSON

THE FIRST ARTIFICIAL SURFING reef in the nation is a flop so far. Completed last September, the sandbag reef at El Segundo, in Los Angeles County, was supposed to generate high-quality surfing waves. It has barely made a ripple. One surfer wondered if the reef had made the surf worse. Leslie Ewing, a senior coastal engineer with the California Coastal Commission, described the reef as "kind of a fizzle." Dave Skelly, the engineer who designed the reef for the Surfrider Foundation, told surfers to "stay tuned."

Named Pratte's Reef in honor of Thomas Pratte, a founder of Surfrider, the structure is a V-shaped reef built of 110 sand-filled fabric bags arranged on the ocean floor. In theory, the configuration "trips" incoming wave swells, causing them to break in long peeling lines perfect for surfing. In reality, incoming waves often collapse haphazardly or don't break at all. Mark Rauscher, Surfrider's environmental program manager, said in February: "The reef definitely has not had a great peeling wave off it."

On occasion, surfers have caught good waves at Pratte's, but overall the reef's rating has been low. In the words of surfer Mike Durand, who keeps an online journal about the reef at www.elporto.com: "My optimistic take on Pratte's Reef is beginning to fade. Today (December 1, 2000) was the biggest swell of the winter. . . . As I sat in the parking lot waiting for the fog to break I fantasized about scoring perfect Pratte's A-frames. . . . When the fog lifted there it was . . . shitty, walled, closeouts without a distinguishable peak or bump. It actually looked better in places the reef was not."

Ewing, echoing his sentiments, said she had "not heard anyone say: 'Let's head to Pratte's.'" She attributes the reef's failure to enhance the surf largely to a reduction of its size from original design specifications. Because the cost of sand has recently skyrocketed, only 1,200 cubic yards were used to build the reef instead of 5,000 as origi-



CHRISTINA S. JOHNSON

Not much of a wave

nally specified. This diminished the reef's elevation, affecting the way waves break, Ewing said.

"I know it's a disappointment to the surfers," Skelly said, but "it's premature to make a judgment call." The Coastal Conservancy has agreed to provide \$200,000 so that 80 more bags of sand can be added to the reef as a way to help stabilize the shore and keep sand on the beach. Skelly has high hopes the extra sand will improve the wave break. "I know it's a disappointment to the surfers," he said. "It may turn out to be a fun little place to surf this summer. This is not the end of all this. It is just the beginning. So, stay tuned."

Pratte's Reef stands as the first official recognition of surfing waves as a natural resource worthy of protection. Chevron U.S.A. provided \$300,000 for its construction, as mitigation for building a groin in 1984 that destroyed waves at a popular surfing spot. ■

Howe Creek: An Experiment in Proactive Ranching

ANNE CANRIGHT

Steve Hackett isn't comfortable being called "forward-thinking." He prefers "thinking outside the box" or, even better, "proactive." However, anyone who can look the words "in perpetuity" in the face is forward-thinking by default. And that's just what Steve Hackett is doing.

He's doing it, moreover, with a 4,000-acre spread in Humboldt County that's been in the Hackett family for almost a century—Howe Creek Ranch, where he grew up and which he now manages. This beautiful expanse of rolling hills and riparian corridors lies in the front range just west of Rio Dell, seven to ten miles from the coast. Hackett derives his livelihood from its forests (Douglas and grand fir, red cedar, and redwood) and pasturage, which nourished sheep for much of the ranch's history and now supports cattle. Its streams provide habitat for endangered winter-run steelhead, chinook, and coho salmon, and the forests are home to a dense population of mammals, from mountain lions, bear, and black-tailed deer to red tree voles and flying squirrels. Numerous species of birds,

including the controversial spotted owl, make their home there as well.

What Hackett has in mind for the property is a rather radical move in the world of ranching, but a move that may well allow him to reach some vital goals: pay off debts, allow his parents to retire, keep the land in production, give marginal timberlands a chance to return to health, and protect natural resources into the bargain. How will he do all this? By placing a conservation easement over all the land his family owns (3,780 acres—220 acres are leased).

A conservation easement is a legally binding agreement in which a landowner sets permanent limitations on the use of the land—restricting future development, for example, or preserving acreage for agriculture. The easement continues "in perpe-



STEVE HACKETT





MICHAEL MAX HENTZ

tuity": no matter who might take ownership of the land in the future, the terms of the original agreement remain in place. Typically, a land trust monitors the easement, making sure that the terms are upheld.

Why would a rancher want to enter into such an agreement? Why encumber the property, limit future development options, and invite some group to keep watch over the way he manages his property? In Hackett's case, the easement would allow a shift from the crisis-management mode that typifies the rancher's life into a proactive mode designed to assure long-term sustainability.

This goal is what keeps him going. Because if Steve Hackett is anything, he's passionate about his land and committed to the rancher's life. It's in his blood. He



MICHAEL MAX HENTZ

Top: Howe Creek watershed, with barn and pond at left, Eel River drainage in the background.

Above: The Hackett family, from left: Jill, Tanner, Conner, Steve

Right: Brush control burn, Howe Creek Vegetation Management Project

Below: Lambs at shearing in Howe Creek's sheep-ranching days



STEVE HACKETT

learned the philosophy of stewardship and husbandry from his own father, who learned it from his father, who in turn learned it from his father, Walter, who in 1913 bought eight or so consolidated homesteads to create the ranch.

Back then, "no one thought about environmental impacts, and the resources—the fish and the timber and the water—were so abundant that no one had a clue what would happen. So they started clearing land for sheep grazing," Hackett says. These sheep—coarse-wool English varieties that could withstand the constant, penetrating moisture of the north coast—soon became the mainstay of the ranch.

Ranch management at the time consisted of regular slashing and burning, a practice that opened up large areas of pasture land between 1924 and the early 1950s. As the land was cleared, the virtually impenetrable buffer of forest was breached and coyotes made their way from the dry eastern valleys into the coastal rangelands. Tasty, tender sheep became their prey of choice. "The federal government instituted a strychnine program; they would inject a horse carcass with strychnine, and they would put a rope on it and drag it along a ridgetop," says Hackett. "Everything from shrews to golden eagles was wiped out. Everything would come: the bears and the coyotes and the mountain lions and the bobcats. Everything."

Other, less globally destructive baits were

tried, with some—but never enough—success. The coyotes remained an intractable nuisance, and in the end, Hackett observes, "the poisons were politically unacceptable. There was too much controversy over it, and it was bad for the sheep industry. It was bad for everything. The writing was on the wall." By the early 1990s, the coyotes had driven all the commercial sheep operations around Howe Creek Ranch out of business.

The Coyotes Were Too Much

EVENTUALLY THE HACKETT FAMILY too had to give up. "We were putting six-strand 5,000-volt electric fences up, and it was really capital intensive—trying to keep ahead of the coyotes. We got a few fences built and a few pastures made, and it was working in those pastures, but we'd have to overgraze them, waste our money throwing hay at the sheep to keep them in there. It was defeating the purpose. And every time they'd go out, they would get annihilated. In April and May 1993 we lost 600 animals to coyotes—25 percent of the herd. So we put them all in trucks and sold them. And we restocked with cattle."

In 1984, Steve had just finished an agricultural business degree at Cal Poly San



COURTESY STEVE HACKETT

Luis Obispo and was on his way to becoming a commercial fisherman. "The fishing business was really booming," he explains, "and ranching was really tough"—so tough that his brother, who was then managing the ranch, decided to seek out a salaried job. So Steve canceled his berth on an Alaska-bound fishing boat and came home to take over.

He saw the future as being in livestock. Timber harvesting had become counterproductive, largely because of regulations that, though intended to protect the environment, worked to the opposite end. "The capital to pay for mitigations to satisfy regulations had to come from overcutting forests," he found. "With sheep and cattle, in contrast, we weren't going backward, we were actually improving the health of the soil on the rangelands, and there were a lot of things we could do with sheep."

So Hackett decided to allow the forest to grow until it could be logged sustainably and bring the best yield; in the meantime, he would generate cash with livestock. To encourage the forest to regrow, he made two important changes in range management: abandoning the slash-and-burn method of clearing unwanted vegetation to keep pastures productive, and adopting a system known as high-density rotation grazing for his cattle.

"We quit burning in 1984. It was experimental. We had been burning to remove brush, because the timber soil wanted to go back into timber. So we'd burn and then reseed, and the sheep, they'd have a big boost, that first year there'd be lush forage, a lot of nitrogen in the soil. The year after that, though, the weeds would start to encroach, and the woody species would come back. For a couple of years the sheep would keep it under control, but by year five to year seven it was back where we couldn't graze it anymore. Slash-and-burn is the typical management practice, and it's still happening. It was state of the art in 1984 when we quit, all over California and in other parts of the West."

Hackett continues to monitor the effects of this management change by means of aerial photography and soil testing, and he likes what he sees: "We are moving toward our goals of perennial meadows and forest, and we are seeing areas of opportunistic species like poison oak shrink."

His second big innovation was to adopt a system of cattle grazing he learned in a continuing education course called "Ranching

for Profit," developed by two Zimbabweans, Stan Parsons and Alan Savory, and run out of Albuquerque. This system is based partly on observations of herbivorous African wildlife, whose grazing patterns are not environmentally destructive.

Instead of letting the cattle range freely over large pastures, which is still the customary ranching practice, Hackett began herding the animals among 32 small pastures, from one to the next, beginning in late October with the arrival of the first rains and finishing when the forage stops growing in early August. The goal is "to clean off all the residual material down to a level that's ideal. If we had complete control, we'd want an inch to two inches of dry, matted perennial grass left, just as a cushion and a little bit of frost protection for the new shoots that come up in the autumn. So we use the cows, to the best of our ability, to make all of our pastures look like that," he explains. (See *Coast & Ocean*, Fall 1992, p. 17 for more on this grazing method.)

Establishing a rotation grazing system, of course, requires money and time: "We invested a lot in fencing and in water for the cattle, so that we could control them—keep them in a herd." Yet the principle is sound and worth the price. "We're using the cattle to manage our vegetation and also generate a cash flow while the forest regrows."

Below: Cattle at Thompson Flat, Howe Creek Ranch



STEVE HACKETT

A FAMILY ON ITS LAND

On our first day together, Steve Hackett and I roamed the country on four-wheelers, from the valley bottom through steeply sloping coniferous forest, to midslope and ridgeline grassland "balds." We talked about the land and his family history. It was clear to me that for him the two are inseparable.

Nearing sunset we stopped, he took a shovel, dug into the grassland cover, unearthed a piece of dark rich soil and held it in his hand. As we stood appreciating the qualities of this living material, an earthworm slithered out into his palm. He remarked about the richness he feels traveling his home land, and how rarely he is free to merely observe and embrace the place. Then he returned to the subject of his family. You cannot separate the man from his home, and the land bears witness to this relationship.

Steve, representing the fourth generation of Hacketts, is a new type of pioneer, a humble philosophical visionary with a rooted work ethic, insuring that his two sons, the fifth generation, are benefited by the return of the chinook in the fall, and steelhead in the summer.

When I pored over images of Steve's great-grandfather and grandfather in the family album, they spoke of sincerity and hard work. The marriage of a positive land ethic with sincere hard work and productivity has always been the road to long-term land and family health, I reflected. It only seems new now because it was lost in the blind pursuit of monetary rewards through wholesale extraction.

Sometimes, one place represents a whole region, one family's history tells of many more. The most transparent and revealing expression of the relationship between people (society) and place is the management and disposition of land. On the north coast, the Hacketts are not the exception but a measure of the rule.

—Michael Max Hentz



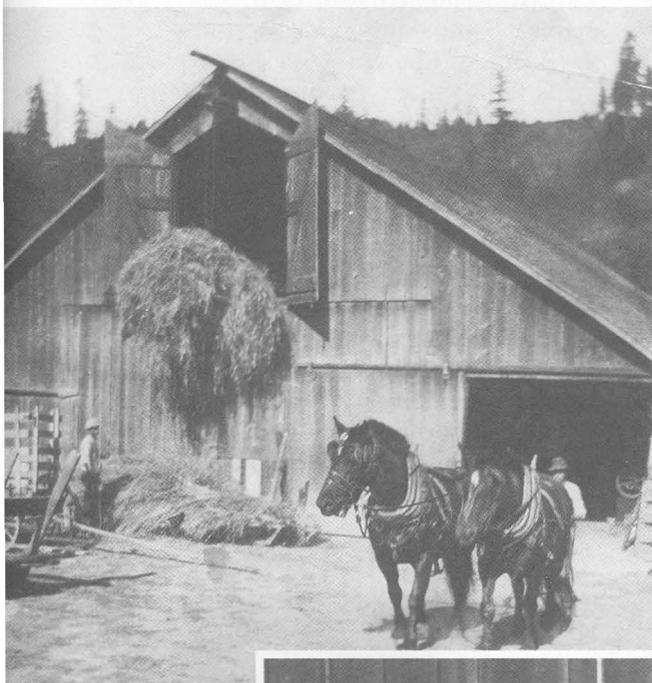
From top: Wilma, Merle, Vernon, Georgie, and Walter Hackett; Merle Hackett with grain grown and threshed in King Field, Howe Creek Ranch; Grandma Hackett with Lena carrying a buck; Walter Hackett with turkeys, 1920s



HISTORICAL PHOTOS COURTESY STEVE HACKETT



From top: Threshing grain, 1931; E.J. Dodge logging at Atwell Creek, 1928; Merle, Vernon, and George Hackett handling hay; women at the E.J. Dodge logging camp cookhouse on Howe Creek; George and Vernon Hackett with their father and the ranch dogs



The Vicious Cycle

ONE OF THE REALITIES of the ranching life is debt. Another is matching resources and needs. In the early days of the ranch, Hackett's great-grandfather and great-uncle sold a large chunk of timberland to Georgia-Pacific to get out of debt. In the 1970s, the family decided to buy more forest land, in a sense recouping that lost acreage. They had a prime piece of property in mind, some 1,400 acres of quality timber, which they knew would eventually come on the market. So they started making plans to harvest some of their trees to pay for the purchase.

In 1989, when the land came up for sale, they were ready with their harvest plan. Threats of new restrictions on timber harvesting to protect the northern spotted owl even gave them a price break. Of course, because of the owl situation, "everyone was panicked—it was a big risk," says Hackett, "and at that time we were panicked too, and as it turned out, rightfully so. We should have been panicked."

(The northern spotted owl was listed as a threatened species throughout its range in Washington, Oregon, California, and British Columbia in June 1990. The loss and adverse modification of suitable habitat—primarily old-growth forests—was deemed responsible for a drastic decline in the owl's population: in 1990 there were only 2,000 known pairs. After the listing, a critical habitat proposal was drafted by the U.S. Fish and Wildlife Service, mainly affecting the timber industry.)

On June 10, 1990, a mere five days before the Hacketts were to begin logging to pay for the land they were buying, the Board of Forestry initiated the spotted owl emergency rules. Any harvesting in forests inhabited by the little owls was halted until the regulatory agencies could decide what to do. "We had a \$400,000 payment coming up in September that year on the newly purchased land, and no way to deal with it," says Hackett. "Later, the course of action they [the agencies] decided on was to require from two to infinite years' worth of population and habitat assessment, conducted by professional consultants and paid for by the landowner, before a harvest could be conducted."

The Hacketts were left with no choice but to take drastic measures: "We had to subdivide and sell two residential properties. And we had to cut timber that we had already cut and gone through," but whose harvest permits still remained in effect. Hackett returned to a stand that he himself had thinned shortly before—and left in very good condition—to cover the September payment for the new property.

Harvesting timber that hasn't had time to regrow is part of the crisis-management pattern that ranchers are so often trapped in. "We could have made it work, but we'd always be in a state where everything was on the marginal low level of productivity," says Hackett. Instead, "we started looking at other alternatives. We could go and clear-cut a small portion of our whole acreage and pay off our debt. But then we hit on another option."

"We could go and clear-cut a small portion of our whole acreage and pay off our debt. But then we hit on another option."



These four-wheelers are the Hackett family's main transport on the ranch, used for everything from fence repair to herding.

MICHAEL MAX HENTZ



MICHAEL MAX HENTZ

Vegetation in the riparian corridor of upper Howe Creek shades and stabilizes the cool-water salmon-bearing habitat critical to the conservation easement.

A Better Life Through Stewardship?

HACKETT HAD BEEN EXPOSED to the idea of conservation easements in the 1980s, when he spent a lot of time working in Sacramento as a Cattle-men's Association director. At the annual convention, land trust representatives would raise the idea. Then bankers would warn against it, saying, "You be careful"—talking to an audience of 500 cattlemen—"because we're not going to loan you any money." Which is right, they're not: you lose your collateral, your development rights. So you have to weigh all the pros and cons."

The Hackett family discussed the easement idea for a year before deciding it was something they wanted to pursue. In the end, they agreed that it was the most viable

option for the future. The easement would reduce the equity value of the land, thus relieving it of development pressures and, by the same token, diminishing the burden of inheritance taxes on heirs. The income derived would provide the capital needed for a strategy that would improve Hackett's land and economic prospects.

In the deal being considered, Hackett would sell an easement, valued at about \$6 million, over 100 percent of the family's land to the Pacific Forest Trust, based in Santa Rosa, or another land trust or appropriate public agency for a bargain price, donating about \$4.6 million of the estimated value. Of the \$1.3 million or so he would receive in cash, 30 percent would go to capital gains tax; of the remainder, most would pay off the mortgage on the 1,400 acres of timber bought in 1989, to free him from pressure to cut trees prematurely just to pay his debt.

Land placed under the conservation easement could not be developed for uses other than agriculture. Certain important habitat areas, including streambanks, would be protected. In addition, the proposed easement



Transplanting steelhead at the Howe Creek Restoration Project diversion

The result, ultimately, would be corridors of mature forest and pristine watercourses, with steelhead, coho, and chinook spawning habitat.

specifies that the lands constituting the ranch (some 30 to 60 parcels, potentially) can never be subdivided. If the ranch is ever sold, it would be as a whole. This, says Hackett, would have advantages for a small resource company wishing to buy, for the property will have no associated speculative value.

Income from sale of the easement would allow Hackett to invest in improving soil on land degraded by slash-and-burn management, take measures against erosion, and provide water for cattle away from streams. And "we won't have to log for another generation," he says. In addition, he hopes to return to school to become accredited in fisheries biology and forestry or—if he can follow his dream—in both, following one interdisciplinary study program. He could then become a consultant on proactive ranching.

The entire proposal, however, is contingent not only on the Hacketts' agreement but also on the ability of the Pacific Forest Trust to raise the \$1.3 million or so of the easement's bargain price. The Coastal Conservancy is considering a proposal that it chip in half the sum needed.

HACKETT'S EXPERIENCE as a sheep rancher and cattleman has been one of continual struggle, whether stretching dollars to make improvements (or simply to make ends meet) or fighting for survival in Sacramento through lobbying and legislative defense. Now he envi-

sions a much more appealing future: sustainable ranching as an aspect of environmental stewardship. Ranching and timber harvesting are not inherently incompatible with environmental protection. Take the spotted owl issue, for example. There are lots of these owls on the Howe ranch. Although they nest in ancient forest, says Hackett, they forage in overcut areas. "I've had spotted owls follow me down the slope in logging operations as I was opening up canopy. Lots of fodder allows dusky-footed woodrats [a favorite prey] to thrive."

Others on the north coast are pursuing strategies similar to Hackett's. He points with satisfaction to groups of ranchers in Humboldt County, including the Bear River Regional Environmental Conservancy and the Yager-Vanduzen Environmental Stewards (the "YES group"), which undertake watershed planning, assessment, and restoration. The new Buckeye Coalition, a nonprofit landowners association, unites timber and rangeland owners in a stewardship effort. (See *Coast & Ocean* web page for contact information.) Members of all these groups concluded that something new had to be done, something that moved away from property-based management to a focus on the ecosystem.

"I still struggle with my courage on this," Hackett reflects, "because it's a complete deviation from everything that we've held on to for four generations here. Because we're giving up complete control, and we limit options." At the same time, he says, "I mapped out 500 acres—all the watercourses on this property that I felt needed to be protected given the terrain, given the slope and the soil—where we're going to let timber grow in perpetuity." The result, ultimately, would be corridors of mature forest and pristine watercourses, with steelhead, coho, and chinook spawning habitat.

His face glows as he describes his dream of making Howe Creek Ranch "a place where we all want to come, where it's beautiful and it gives a sense of serenity and spirituality. I think of the conservation easement as a way of protecting our heritage, of preserving what is dear to us." In his mind, it's an idea whose time has come. ■

Beach Water Tests MAY BE OFF TARGET

CHRISTINA S. JOHNSON

ALTHOUGH THE STATE NOW requires that local agencies test water quality at popular beaches for bacterial contamination, a new study shows that these tests may be inadequate indicators of human health risks. For bacteria are not the only microscopic pathogens drifting in the surf. Viruses that lodge in the human digestive tract also make their way into coastal waters.

Sunny Jiang, assistant professor of environmental studies at the University of California, Irvine, tested water samples at 12 major river mouths in southern California for the human adenovirus, a potentially harmful pathogen (a cousin of the hepatitis A virus). She found adenovirus at four of the 12 sites: the Los Angeles, San Gabriel, Santa Ana, and Tijuana river mouths. Of these, however, only the Los Angeles river mouth also had high fecal bacteria counts, the standard criterion for evaluating water quality, closing beaches, and monitoring compliance with federal clean water laws. The Los Angeles River had one of the highest bacteria counts when Jiang took her water samples in February and March 1999. Malibu Lagoon and Moonlight Creek in San Diego County also ranked high on bacteria counts, but she found no adenovirus there.

Jiang's study did not determine whether the adenoviruses were alive or infectious. Their presence, however, does definitively indicate that human waste is polluting our waterways. Because some viruses can live as long as 130 days in seawater, Jiang said that even dead adenoviruses may point to the presence of other virulent viruses.

"We need to reconsider our monitoring and coastal water standards," Jiang concluded. "The current open and closed beach status does not indicate the human health risk."

Steve Weisberg, the executive director of the Southern California Coastal Water Research Project, said Jiang's work has two take-home messages: "For one, we know the bacteria that we see are not due entirely

to things like birds or cats. The second message is that the weak correlation (between bacterial and viral contamination) means we should rethink how much reliance we place on bacterial measurements."

Epidemiological studies have established a link between bacterial counts and illness, but no similar studies have shown that viral contamination is associated with an increased chance of illness. "We don't have a way to translate the number of viruses you find to a health risk," said Mitzy Taggart, staff scientist at Heal the Bay in Santa Monica.

Viral detection methods are also unwieldy and expensive. Jiang, for instance, must take 20-liter water samples to capture enough viruses to run her tests. Taggart said: "The science behind monitoring for viruses is in its infancy. [Jiang's] work is moving us toward the time when we will be able to use viral-detection methods at the beaches."

Jiang's study was funded by California Sea Grant. She is currently working with the Public Facilities and Resources Department in Orange County to track viral contamination in the chronically polluted waters of the Aliso Creek watershed. She is also working with other UC Irvine professors on a project to study the impact of the Santa Ana River on beach pollution in Huntington Beach, which was closed most of the summer in 1999 and 2000.

Jiang theorizes that Huntington Beach pollution could be originating from wastewater discharged four miles offshore by an outfall pipe. Tides, ocean currents, and warm water released by a nearby power plant may be sweeping the wastewater ashore, she said. She plans to test this hypothesis by tracking human contaminants as they drift from the outfall pipe toward shore. ■

Christina S. Johnson works for California Sea Grant, within the National Sea Grant College Program, National Oceanic and Atmospheric Administration, U.S. Department of Commerce.



COURTESY UNIVERSITY OF SOUTHERN CALIFORNIA REGIONAL HISTORY COLLECTION

Water sampling for bacteria has been done for a long time, but finding out about viruses is more difficult. Here a lab assistant samples water from the Los Angeles River (1954).



COASTAL CONSERVANCY NEWS

THANKS PRIMARILY to Proposition 12, the parks and wildlife bond act passed by California voters in March 2000, the Coastal Conservancy was able to make significant progress between October 2000 and January 2001 in improving public access and protecting natural resources along the coast and around San Francisco Bay. With the state's economy strong and healthy, the Conservancy's ability to undertake creative projects with its partners was also expanded by legislative appropriations, the Governor's Challenge Grant Program, and a healthy infusion of contributions to local land trusts and other Conservancy partners. Recent projects include:

LOS ANGELES RIVER PROJECTS

IN DECEMBER THE CONSERVANCY authorized the Los Angeles and San Gabriel Rivers Watershed Council to award over \$600,000 of Conservancy funds for resource enhancement and public access projects along the Los Angeles River and its tributaries. The Conservancy had authorized this funding to the Council last June, subject to approval of specific projects. The Council reviewed 13 proposals and recommended that six be funded. It selected three backup projects to be funded only if one or more of the others proved unworkable.

Six grantees and projects were authorized for funding by the Council and the Conservancy. One has since been withdrawn. Those remaining are:

- City of South Gate: \$100,000 to prepare a riparian habitat restoration plan for an 8.5-acre parcel along the Los Angeles River
 - North East Trees: \$63,005 to prepare a bikeway and greenway plan for the stretch of the Los Angeles River from Cypress Park (Los Angeles) to Maywood
 - National Audubon Society: \$116,110 to prepare a habitat restoration plan for Ernest E. Debs Regional Park on Arroyo Seco
 - Friends of the River: \$86,562 to prepare a hydrodynamic study of Tujunga Wash
 - Friends of the River: \$88,297 for surface and subsurface water sampling in the River next to Taylor Yard.
- The sixth will be one of these:
- Friends of the River: \$92,758 for wetland and riparian mapping of the Los Angeles River Watershed
 - Arroyo Seco Foundation: \$179,286 to prepare a stream restoration plan for part of Arroyo Seco
 - Friends of the River: \$29,243 to prepare a design study for expanding the Los Angeles River Greenway in the San Fernando Valley.

Part of the current authorization will be used by the Watershed Council for administration. The Los Angeles and San Gabriel Rivers Watershed Council is a consortium of government agencies, community and environmental groups, businesses, and academic institutions seeking to prevent or resolve problems in the watershed in a cooperative, collaborative manner.

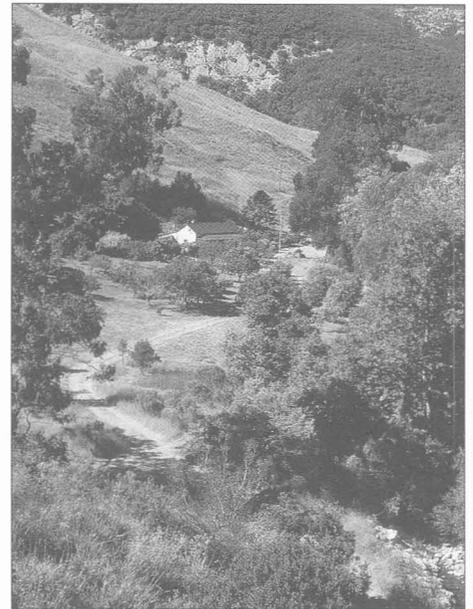
HISTORIC RANCH ON GAVIOTA COAST TO BE PRESERVED

PEOPLE HAVE BEEN HOLDING meetings, leading tours, and giving presentations on the importance of preserving the Gaviota Coast for several years now. State legislators have budgeted millions of dollars for this purpose for two years in a row. The first major conservation purchase is finally under way. In October, the Coastal Conservancy allocated up to \$4 million to enable the Land Trust of Santa Barbara to proceed with the purchase of the 800-acre Arroyo Hondo

(J.J. Hollister) Ranch as a natural and historic preserve for the public to visit, study, and enjoy.

The ranch extends from the ridgeline of the Santa Ynez Mountains to the ocean, on both sides of a year-round creek. It has changed little in the past 150 years. Arroyo Hondo Creek, which starts in Los Padres National Forest, is habitat for steelhead trout, red-legged frogs, and other species. Peregrine falcons, sharp-shinned hawks, four species of owls, mountain lions, and black bears have been seen in the canyons. Steep canyon walls with dramatic sandstone formations, fern grottos, granite ravines, and sweeping views of the ocean leave visitors in awe. Hiking opportunities are spectacular. Ranch structures include an 1840s adobe residence, a barn, corrals, a group campground, a bridge, several acres of fruit trees, and three wells.

The Santa Barbara Land Trust obtained an option to buy the ranch after almost a year of negotiations with



Arroyo Hondo Ranch

RANDY LEFFINGWELL/LITSIC

17 partial owners. The funds from the Coastal Conservancy represent about two-thirds of the purchase price. The land trust intends to raise the rest from public and private sources.

MONTEREY'S WINDOW-ON-THE-BAY OPENS WIDER

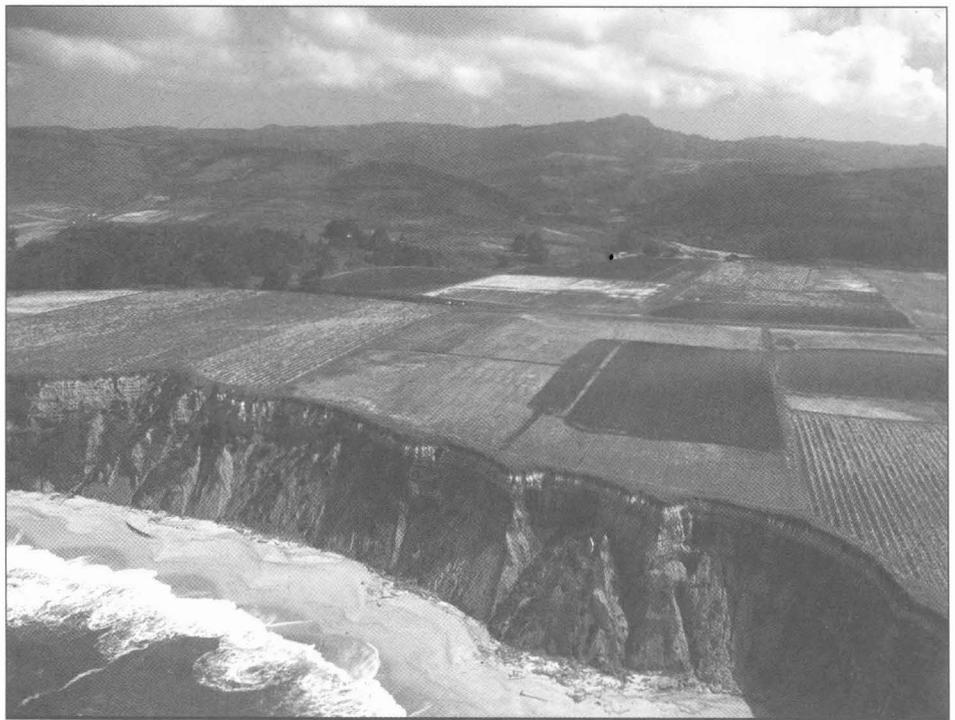
THE CONSERVANCY CHIPPED IN another \$1 million in Proposition 12 funds last December to enable the City of Monterey to buy 4.5 acres on the bay side of Del Monte Avenue, east of the municipal wharf, for its Window-on-the-Bay project. The purchase will enable the City to move the Coastal Recreational Trail away from Del Monte Avenue, separating bicyclists and pedestrians from vehicular traffic.

The City has an option to purchase the property for just under \$4 million from Catellus Development Corporation. In addition to the newly approved funds from the Conservancy, it will use its own funds and \$600,000 remaining from a \$2 million Conservancy grant approved in December 1999 for Window-on-the-Bay. Since 1981, nine of 16 properties the City wants to include in this project have been acquired, and seven of these have already been converted to parkland.

NEW TRAILS AND PROTECTION FOR PURISIMA FARMS

THE CONSERVANCY APPROVED \$3 million to the American Land Conservancy last December, enabling this land trust to buy conservation and trail easements appraised at \$4.2 million on a coastal farm just south of Half Moon Bay in San Mateo County.

The 534-acre property, Purisima Farms, lies on both sides of Highway 1 and has about a mile of ocean frontage, with over 4,000 feet of sandy beach. It is bordered on the north and south by the Cowell Ranch, on which the Coastal Conservancy acquired easements in 1988 in a joint effort with the Peninsula Open Space Trust (POST). POST has owned Purisima Farms since 1996 and will continue to lease the property's 250 acres of agricultural land to its current tenants, who grow artichokes and brussels sprouts.



Purisima Farms

The trail easements will allow a three-mile extension of the Coastal Trail to be built across the Cowell and Purisima properties that will eventually link with upland trails leading to the ridge and over to San Francisco Bay. The conservation easements will permanently protect farmland and prevent subdivision or significant development on 300 acres of coastal lands that, according to the Department of Fish and Game, support as many as 120 different wildlife species. The endangered San Francisco garter snake and threatened California red-legged frog inhabit two ponds and two miles of riparian corridor along Purisima Creek, along the northern border of Purisima Farms.

Eventually, the Land Conservancy expects to transfer the easements to a local public agency such as the Mid-peninsula Regional Open Space District. POST will apply the funds it receives for sale of the easements to its ongoing conservation work. Of the Conservancy's contribution, \$2 million will come from federal transportation grant funds, and \$1 million from Proposition 12.

MORI POINT HEADLAND PROTECTED

IN SEPTEMBER THE TRUST FOR Public Land (TPL) seized a fleeting opportunity to acquire Mori Point, a headland that protrudes several hundred feet into the ocean just south of the main beach in Pacifica. Conservation organizations have sought to protect Mori Point since at least the 1970s. In December the Conservancy granted \$1 million to TPL to reimburse it for part of the acquisition cost.

The nonprofit land trust bought the property at auction for \$3.3 million, using its own capital and borrowed funds. Since 1984 owners had proposed two major developments, one for a hotel/conference center and 60 homes, another for a casino.

This 105-acre headland property, north of Rockaway Beach, offers spectacular views of San Pedro Point to the south and, on clear days, Fort Funston, the Marin headlands, and Point Reyes to the north. At lower elevations, freshwater wetlands provide habitat for the endangered San Francisco garter snake and the threatened California red-legged frog. A popular levee-top trail leads to the point from Sharp Park Beach and Pacifica Pier. A

ROBERT BUELTSMAN/POST © 1997



Mori Point, looking north

trail link could be established between Mori Point and Rockaway Beach to complete the Coastal Trail stretch between Pacifica Pier and San Pedro Point.

TPL plans to transfer Mori Point to the National Park Service for inclusion in the Golden Gate National Recreation Area, but the Park Service does not expect to have funds to buy the property from TPL before 2002. The Pacifica Land Trust has initiated a local fundraising campaign that so far has brought in \$85,000 in donations from over 200 individuals to reimburse TPL.

PRESERVE IN ALAMEDA COUNTY TO GROW

THE EAST BAY REGIONAL PARK District will add 320 acres to the Brushy Peak Regional Preserve with the help of the Conservancy, which last December approved \$300,000 in Proposition 12 funds toward the \$1 million purchase. The park district will contribute the bulk of the acquisition cost.

The property, now owned by the Weaver Family Trust, is in an unincorporated area of Alameda County just north of the city of Livermore. It is part of a 20,000-acre wildlife corridor that extends north to Mount Diablo and on to Black Diamond Mines Regional Park in eastern Contra Costa County. It provides habitat for a variety of species, offers spectacular ridgetop views, and is part of the designated regional trail route between Del Valle State Recreation Area in eastern

Alameda County and the Delta Shoreline in eastern Contra Costa County. A road that leads from I-580 in Livermore to the Weaver property will give the public a new access route to the Brushy Peak Preserve. The park district earlier bought 800 acres with the help of \$300,000 from the Conservancy, adding to 669 acres purchased in 1994 by the Livermore Area Recreation and Parks District.

RICHMOND'S FERRY POINT PIER TO BE RESTORED

THE EAST BAY REGIONAL PARK District will restore about 250 feet of Ferry Point Pier, at Miller/Knox Regional Shoreline in Richmond, with the help of \$492,500 in Proposition 12 funds approved by the Conservancy in October. The pier, built mostly of wood in 1899, was the western terminus of the Atchison, Topeka, and Santa Fe Railroad. Ferry Point was the first western U.S. port to allow direct transfer of railroad cars to barges, and its construction marked the beginning of industrial development in Richmond. Commercial use of the pier ended in 1975, and in 1984 a fire damaged it severely.

The park district intends to restore and open this part of the pier for fishing and other public recreational use while also preserving it as a historic landmark. It will contribute \$479,500 to the project; an additional \$376,000 will come from a federal transportation grant.

DEER ISLAND PRESERVE TO DOUBLE IN SIZE

WITH THE HELP OF \$340,000 OF Proposition 12 funds approved by the Conservancy in October, the Marin Audubon Society has bought 84 acres with seasonal freshwater wetlands that provide foraging and resting areas for shorebirds and waterfowl, as well as a refuge from storms and rough water for diving birds wintering on San Francisco Bay. This acreage will be added to the 126-acre Deer Island Preserve in Novato, along with 60 acres being donated to the Society by an adjacent private owner, expanding the reserve to more than twice its current size. The Society will convey both properties to the Marin County Open Space District, which owns and manages the preserve. The Open Space District has provided \$42,000 for the purchase.

NEW ENTRANCE ROAD TO HOOD MOUNTAIN

IN DECEMBER THE CONSERVANCY approved \$217,000 to help the Sonoma County Regional Parks Department to repair the entrance road into 1,450-acre Hood Mountain Regional Park, east of Santa Rosa in the Mayacamas Ridge, and allow the reopening of its main parking and picnic areas.

Built in 1972, the mile-long entrance road was repeatedly damaged by landslides and erosion, and has been closed to vehicles since 1988. Visitors must park in a makeshift area and hike down the steep road to the picnic areas and trailhead. Once the road is repaired, the public will be able to reach 15 miles of multipurpose trails in Hood Mountain Regional Park and trails in the adjacent state-owned McCormick Sanctuary and Sugarloaf Ridge State Park.

NEW TRAIL IN SEBASTOPOL

IN JANUARY THE COASTAL Conservancy approved \$258,000 from Proposition 12 funds to enable the City of Sebastopol to build a three-quarter-mile trail circling a 60-acre site, and restore oak woodlands at the Laguna de Santa Rosa, the Russian River's largest tributary.

The Laguna feeds one of the largest freshwater wetlands in northern Cali-

fornia, but over the last 170 years it has been cleared, filled, channeled, drained, and developed into a patchwork of agricultural, residential, and commercial uses.

The new four-foot-wide trail will connect to the Joe Rodota Regional Trail, which runs from Santa Rosa to Sebastopol and on to the Russian River. Native oak woodlands and savannas will be restored and alien vegetation removed along the trail corridor. Much of this work will be done by volunteers who, under the city's Laguna Keepers program, have already planted hundreds of native trees and shrubs in the area over the last two years.

The City currently leases the 60 acres to the Barlow Company, which uses it as a disposal site for apple processing waste. The company has agreed to take part in the restoration. The Laguna de Santa Rosa Foundation, Circuit Rider Productions, and Questa Engineering will also help with the project. The loop trail complements a comprehensive restoration and public access planning effort undertaken by the Sonoma Land Trust with \$80,000 from the Conservancy, approved last October.

\$11.4 MILLION FOR COASTAL AND SAN FRANCISCO BAY TRAILS

THE COASTAL CONSERVANCY approved a total of \$11.4 million of Proposition 12 money last December for three major trail projects along the coast and around San Francisco Bay.

Almost \$7.4 million goes to the Association of Bay Area Governments (ABAG) to provide funding for the San Francisco Bay Trail Project, which is building a 400-mile trail around the entire Bay shoreline, linking parks and open spaces. So far, about half of this trail network has been completed, with the help of more than \$7 million from the Conservancy. The funds most recently approved will go toward new and ongoing projects. Several trail gaps will require costly property acquisitions, and some trail sections must be realigned to accommodate wetland restoration projects that were not anticipated in the original Bay Trail Plan.

The Bay Area Ridge Trail Council will receive over \$3.4 million from the Conservancy toward the completion of the

San Francisco Bay Area Ridge Trail, which also will eventually be 400 miles long, running along or near ridgelines and also linking parks and open spaces. So far, 220 miles are in place.

To advance work on the California Coastal Trail, which is to run the entire length of the California coast, the Conservancy approved \$600,000 to Coastwalk, a nonprofit organization, to enable it to develop detailed plans and maps of the Oregon-to-Mexico trail.

PUBLIC WINS GORGEOUS BIG SUR RANCH

TO PROTECT ONE OF THE MOST magnificent stretches of the Big Sur coastline from being subdivided into luxury estates, the Coastal Conservancy approved \$5 million to the Trust for Public Land (TPL) in February so that the land trust can acquire Bixby-Ocean Ranch for public use and resource protection.

The 1,226-acre property lies on both sides of the highway, extending for about two miles south of the Bixby Bridge and reaching from the ocean into the foothills of the Santa Lucia

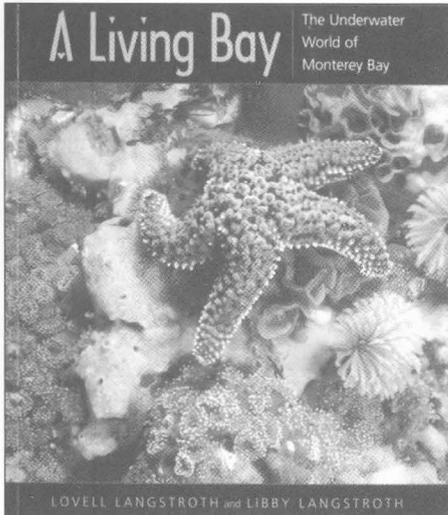
Mountains. The views it offers are world-famous. It has two accessible sandy beaches, two creek valleys, redwood groves, broad coastal terraces, and includes Hurricane Point, Sierra Hill, and other landmarks. Coastal and mountain trails already exist on the property and more can be built. There are areas suitable for campgrounds and day uses. TPL expects to acquire the ranch by the end of August and to convey it by March 2002 to the U.S. Forest Service for management.

The estimated purchase cost will be \$26.25 million. The landowner, Woodside Development of Las Vegas, bought the ranch about a year ago for about \$10 million from the heirs of Allen Funt, creator of Candid Camera shows, who had owned it since 1977. The developer had discovered what the Funts apparently did not know: that 19th century deeds divided the property into nine parcels. After confirming the legality of these parcels with the Monterey County planning department, Woodside Development bought the ranch, intending to sell it as nine individual home sites.



Bixby Creek Bridge. The Bixby-Ocean Ranch extends two miles south of the bridge, including both beach and ridge.

TRUST FOR PUBLIC LAND



A Living Bay: The Underwater World of Monterey Bay, by Lovell Langstroth and Libby Langstroth. University of California Press and Monterey Bay Aquarium, 2000. 288 pages, \$60 (hardcover), \$29.95 (paper).

AMONG THE MOST BEAUTIFUL and fascinating photographs that have passed through the *Coast & Ocean* office in this magazine's 15-year existence were Lovell and Libby Langstroth's underwater photographs of creatures in Monterey Bay. We regretted not being able to publish any of them in full color with Anne Canright's interview in our Spring 2000 issue. (We do have a few on our web page.) Now this book is out, and the photographs are breathtaking.

The Langstroths' passion for their subject comes through in their writing as well. Many of the creatures described in *A Living Bay* are little-known, and the information about their lives and interactions is fascinating. This is an exemplary work—solid science based on original research, presented with clarity and beauty. The thrill of discovery pervades every page, for author and reader alike.

—HMH

From Monsoons to Microbes: Understanding the Ocean's Role in Human Health, by the National Research Council. National Academy Press, Washington, DC, 1999. 132 pp., \$34.95 (hardcover only). Can be ordered via internet at www.nap.edu at discount.)

THE NATIONAL RESEARCH COUNCIL recently convened a panel of scientific experts to explore how the oceans influence human health. This report is the result of that effort. The first part explores hazards to human health, including infectious ocean-borne diseases and harmful algal blooms. It covers the work of Dr. Rita Colwell in linking cholera outbreaks in Peru and Bangladesh to climate-induced events such as elevated water temperatures during El Niño episodes and to nutrient enrichment from land runoff. Also explored is the role of nutrient runoff in increasing the frequency and duration of harmful algal blooms.

The panel that prepared this report calls for expanded use of DNA probes and biological sensors to improve detection of pathogens and algal toxins; more monitoring, particularly in the developing world, to detect the onset of algal blooms and waterborne disease agents; and expanded monitoring to detect algal toxins in seafood traded around the world.

The second part of *Monsoons to Microbes* reviews the value of marine biodiversity to biomedicine. Research on sea stars and urchins has helped us to understand how the human body fights infections. Research on horseshoe crabs has provided valuable information on how our eyes see. The authors call for more cross-training between medical researchers and marine scientists, as well as more research on developing antibiotics from marine sources. They also recommend that experimental animals be bred in labs to reduce collecting pressures on natural populations.

Monsoons to Microbes places headline-grabbing toxic blooms and disease outbreaks in a broader scientific context. With its extensive citations of scientific literature, this report will be a helpful reference for individuals and organizations working on marine pollution, coastal water quality and climate change issues. It is sobering to consider that global warming has the potential of increasing the spread of human disease by means of ocean processes.

—Wesley Marx

San Diego-Tijuana International Border Area Planning Atlas, Paul Ganster, ed., San Diego State University Press, 2000. English/Spanish, 64 pages, \$44.50 (spiral bound paper folio).

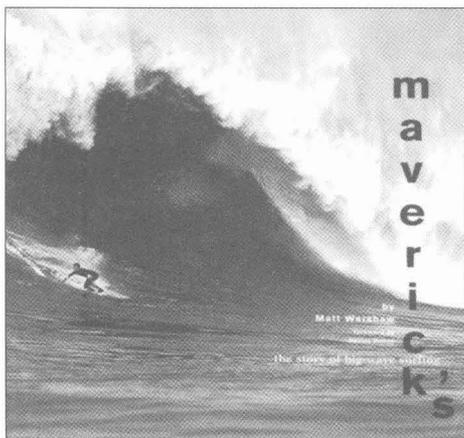
ALTHOUGH THE ECONOMIC and social life on both sides of the U.S.-Mexico border area have become inextricably linked in recent decades, you'd never know it looking at maps of the region. From this side looking south and from the south looking north, maps end at the international line. Until now this has been the rule from the halls of government to travel agencies and everywhere in between. Now there's an atlas that reflects reality.

The preparation of a unified map of the border area is a tall order, since U.S. and Mexican data are collected according to differing criteria and methods, and are analysed differently. Key progress was made in the late 1990s with the completion of the Tijuana River watershed geographic database by U.S. and Mexican partners, funded by the National Oceanographic and Atmospheric Administration (NOAA). As envisioned by NOAA, numerous local planning organizations, including the San Diego Association of Governments and Tijuana's Instituto Municipal de Planeación, took the database as a starting point and developed an atlas covering 15 separate planning topics. The full-color maps are accompanied

by detailed essays written by local planning leaders. These will assist the reader in understanding the complex issues facing North America's fast-changing binational megalopolis.

For purchasing information contact the Institute for Regional Studies of the Californias: (619) 594-5423 or irsc@mail.sdsu.edu.

—Jim King



Maverick's: The Story of Big-Wave Surfing, by Matt Warshaw. Chronicle Books, San Francisco, 2000. 224 pp., \$29.95 (hardcover).

MATT WARSHAW HAS CRAFTED an excellent history of big-wave surfing, from its origins in the warm tropical waters of Hawaii nearly 250 years ago to Maverick's, today's newest big-wave arena, in the cold waters off the California coast near Half Moon Bay. While documenting the progression of big-wave surfing over the past several decades, *Maverick's: The Story of Big-Wave Surfing*, also gives us a unique glimpse into the exciting and media-crazed world of today's big-wave-riding culture, where the soul of surfing appears to some observers to be fading away in the wake of corporate sponsorships, internet web sites, and the hunt for the almighty dollar.

In a football field-sized stretch of ocean off Pillar Point, less than 20 miles from downtown San Francisco, the awesome and deathly power of Maverick's has over the past few years captured the attention of a world-wide audience of surfers and nonsurfers alike. The book is full of eloquent and informed perspectives on events at

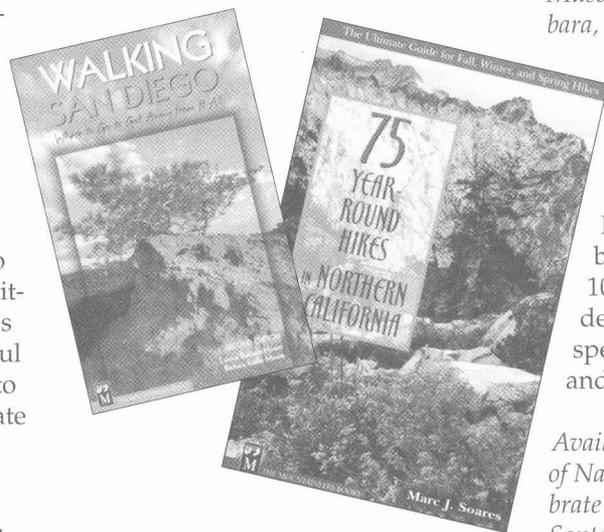
Maverick's that have changed big-wave surfing—from the tragic death of a professional Hawaiian surfer there in 1994 to the growing commercialization of both the sport and the place brought about, in part, by the annual corporate-backed surfing contest now held there each winter.

Tim Duff, a Coastal Conservancy project manager, lives in Half Moon Bay and has been surfing the smaller waves of the northern California coast for the past 20 years.

75 Year-round Hikes in Northern California, by Marc J. Soares. Mountaineers Books, Seattle, 2000. 240 pp., \$16.95 (paper).

Walking San Diego: Where to Go to Get Away from It All, 2nd Ed., by Lonnie Burstein Hewitt and Barbara Coffin Moore. Mountaineers Books, Seattle, 2000. 256 pp., \$15.95 (paper).

TWO NEW GUIDEBOOKS from the Mountaineers continue their tradition of handy trail guides with unusual approaches. *75 Year-round Hikes* focuses on off-season (fall, winter, and spring) treks in places that are easily accessible. Most are of easy to moderate difficulty, including many family hikes and sites of special interest to bird watchers. I



did find the organization of the book a bit confusing, and it's a somewhat tricky to locate the site maps in relation to the main map, but the information should be adequate to find your way to the sites.

Walking San Diego is an update of a 1989 book, with 24 new hikes added. In addition to the main sections on coastal and inland San Diego, there are chapters on exploring lakes, streams, piers, gardens, and tide pools, as well as a birder's guide.

—HMH

ALSO OF INTEREST:

Sand Rights '99: Bringing Back the Beaches, edited by Lesley Ewing, Orville T. Magoon, and Sheila Robertson. American Society of Civil Engineers, Reston, VA, 2000. 304 pp., \$49 (paper).

THE SAND RIGHTS '99 conference in Ventura, sponsored by the Coastal Zone Foundation and the California Shore and Beach Preservation Association, brought together experts on coastal processes, coastal resource management, and land-use law from the U.S. and abroad. Many of the conference papers published in this volume feature California examples of beach management problems and challenges.

Bivalve Seashells of Western North America: Marine Bivalve Mollusks from Arctic Alaska to Baja California, by Eugene V. Coan, Paul Valentich Scott, and Frank R. Bernard. Santa Barbara Museum of Natural History, Santa Barbara, 2000. 776 pp., \$99 (hardcover).

THIS EXHAUSTIVE WORK describes and illustrates the 472 known species of clams, oysters, mussels, and scallops found in the waters off North America's Pacific Coast. More than 1,000 black-and-white photographs and 100 line drawings accompany detailed information about each species's biology, physiology, habitat, and ecology.

Available from the Santa Barbara Museum of Natural History, Department of Invertebrate Zoology, 2559 Puesta del Sol Road, Santa Barbara, CA 93105. More information and a sample chapter can be found online at: www.sbnature.org/atlas/bivbook.htm.

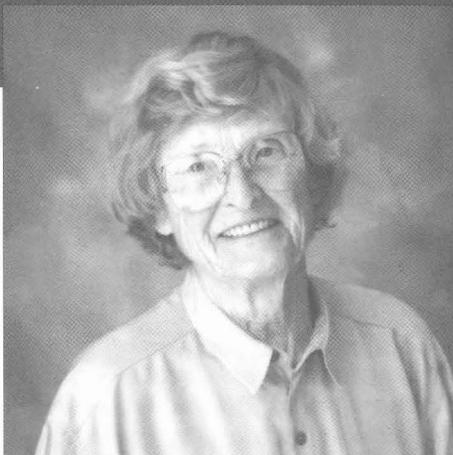
Margaret Azevedo

THE FIRST CHAPTER—THE first volume, really—of the Coastal Conservancy's history closed with the passing of Margaret Azevedo, who served as a public representative (and sometimes chairman) on the Conservancy Board from its beginning in 1976 until her death at age 86, on December 2, 2000. Throughout those 25 years, she kept her eyes on the agency's purpose and passed on her vision to generations of fellow board members. She played a key role in shaping the Conservancy's character.

Azevedo saw the Conservancy as the essential vehicle for making coastal conservation feasible in the midst of powerful clashing interests. It was the practical vehicle for getting the best possible solution of conflicts that pitted conservation efforts against growth needs and private interests.

The need for such an agency emerged during the four years after the passage of Proposition 20, the 1972 coastal initiative. Azevedo sat on the North Coast Regional Coastal Commission as the California Coastal Plan was taking shape and the coastal permitting process was beginning. The stakes were high and emotions ran strong. It became clear that the regulations being written to protect the coast would clash—and could well shatter—against demands for private property protection and growth. A vehicle was needed to bypass or resolve land use conflicts before they moved into an adversarial process. Therefore, the Legislature created the Conservancy and endowed it with a range of flexible powers so that it could take positive actions, seize unexpected opportunities, and undertake innovative projects.

In an article she wrote for the Conservancy's tenth anniversary ("To Boldly Go . . ." published in this maga-



zine, which was then named *California Waterfront Age*), Azevedo wrote that the Conservancy's job required it "to blaze trails out of thorny thickets and find ways out of predicaments that had defeated others. . . . If it was not up to that task, it had little reason for being."

She explained that "when the agency is called in, it is usually to confront a seemingly hopeless impasse, something the local government—caught between Coastal Act regulations and frustrated landowners, or lacking the financial and technical means to realize some element of its Local Coastal Plan—has not been able to resolve."

The unique character the Conservancy evolved in its formative years suited Azevedo's own nature. She was a practical person who kept her sights on the big vision but was mindful of obstacles on the path.

Whatever their differences in point of view, those who knew her and worked with her respected her for her insight, her keen and playful mind, her dedication, her amazing energy, and her non-nonsense way of cutting through confusion and going straight to the heart of any issue.

In 1997 she published *Environmental Overdose: California's Environmental Law Needs Treatment* (Wood Rat Press, Tiburon, CA), offering case studies of silliness embodied in California's Environmental Quality Act, along with comments, proposed solutions, witty

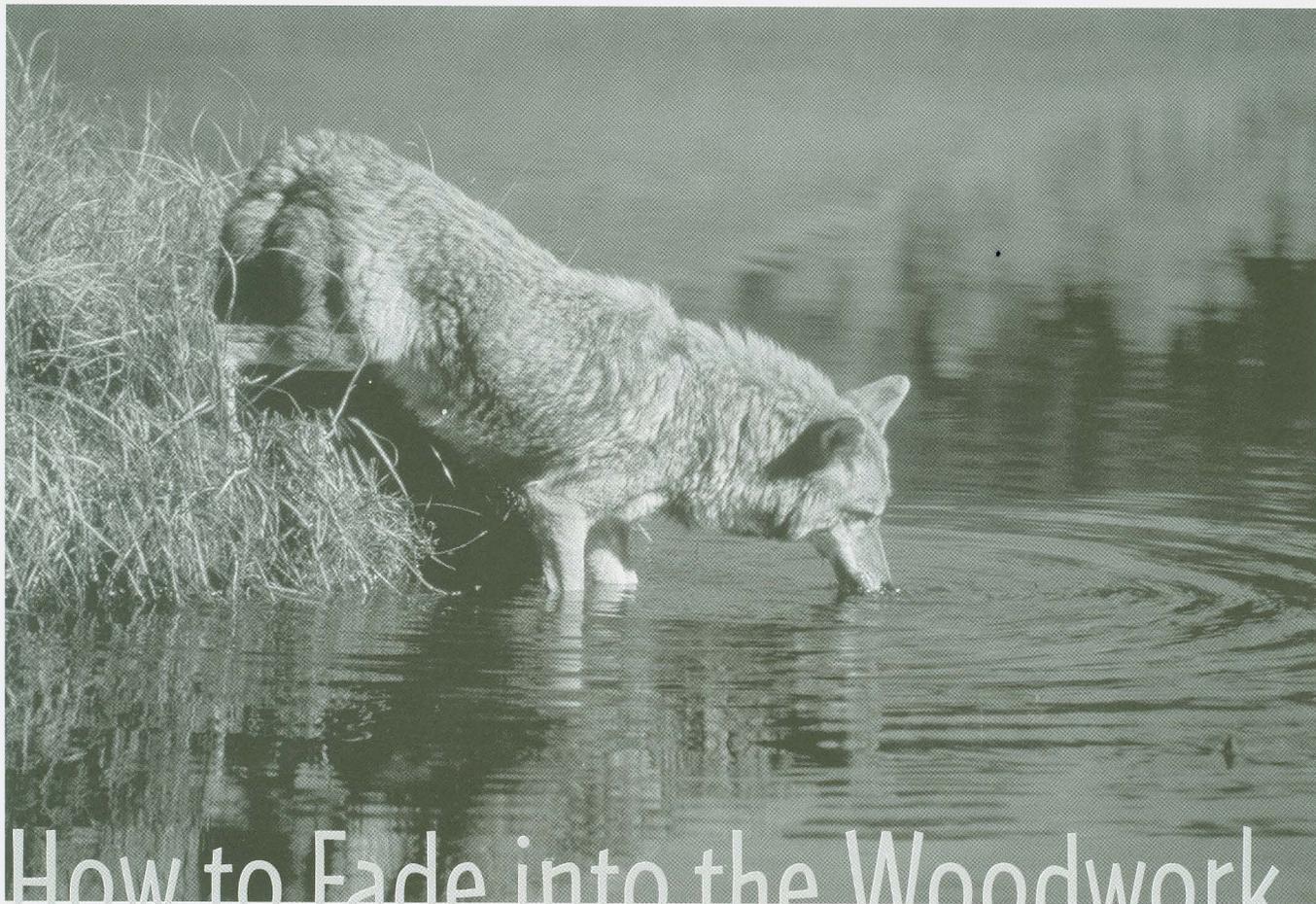
down-to-earth insights, and common-sense advice. Reviewing the book, Marcia Grimm said it is "short, clever, and refreshingly to the point." That was Margaret Azevedo's way.

"She was an icon and role model for me," said Penny Allen, who was appointed by Governor George Deukmejian, reappointed by Gov. Pete Wilson, and served as Conservancy chairman for 9 of her 12 years on the Conservancy. "She was feisty, ribald, opinionated, passionate, witty, loyal, with a razor-sharp mind, absolutely full of life, and always generous in sharing her views without insisting you agree with her."

Allen was one of more than a hundred people who packed the Tiburon Town Hall on February 21 for a celebration of Azevedo's life. Almost all who stepped up to speak told gratefully of what they had learned from her. Joseph Petrillo, the Conservancy's first executive officer, said she had taught his daughter what a strong independent woman can be. Peter Grenell, the second executive officer, recalled watching her step across a stream on a log and thinking: "I hope I can do this when I'm 80." Gary Hernandez, current chair, said she convinced him to take a vacation.

Former Marin County Supervisor Gary Giacomini said "she was perhaps the most important person in the county in the '60s and '70s in preserving the character of the county." He credited her work as a public citizen with leading both him and Senator Barbara Boxer into politics.

Conservancy staff, past and present, have their own cherished Margaret stories. Her imprint is multicolored and indelible. In the words of Penny Allen: "Margaret Azevedo is the heart and soul of the Conservancy, forever."



How to Fade into the Woodwork

THE ULTIMATE WILDLIFE WATCHING experience is “viewing animals without interrupting their normal activities. It’s seeing how animals act in the wild, not just how they react to humans. Instead of just a glimpse, you have an encounter—a chance not only to identify the animal, but to identify with it.”

So advises Watchable Wildlife, Inc. on its web site (www.watchablewildlife.org), then offers some viewing tips.

Key points to keep in mind:

- Most wildlife species are active at dawn and at dusk.
- Wear natural colors, unscented lotions, and natural fabrics—synthetics tend to rustle.
- Walk softly. You’ll have a better chance of seeing animals, and will be less likely to disturb them, if you move slowly, smoothly, and steadily. Stay hidden from view when possible. Use your ears as well as your eyes.
- Stay on established trails and keep your distance. Never approach a nest or den.

- Learn to recognize and respect wildlife alarm signals. When an animal changes behavior as a result of your presence, you are too close.
- Bring binoculars, spotting scope, or camera zoom lens (400 mm is best) for close-up views, and materials such as field guides and checklists to help you identify animal species and suggest where they are most likely to be seen.
- Do not feed wildlife. Your handouts could hurt the animals’ digestive systems, make them dependent on future handouts, or even kill them.
- Be patient.

The *California Wildlife Viewing Guide*, 2nd Edition, by Jeanne L. Clark (Falcon Press, 1996) lists 200 Wildlife Viewing Areas, identifiable from roads and highways by a brown binocular sign:





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