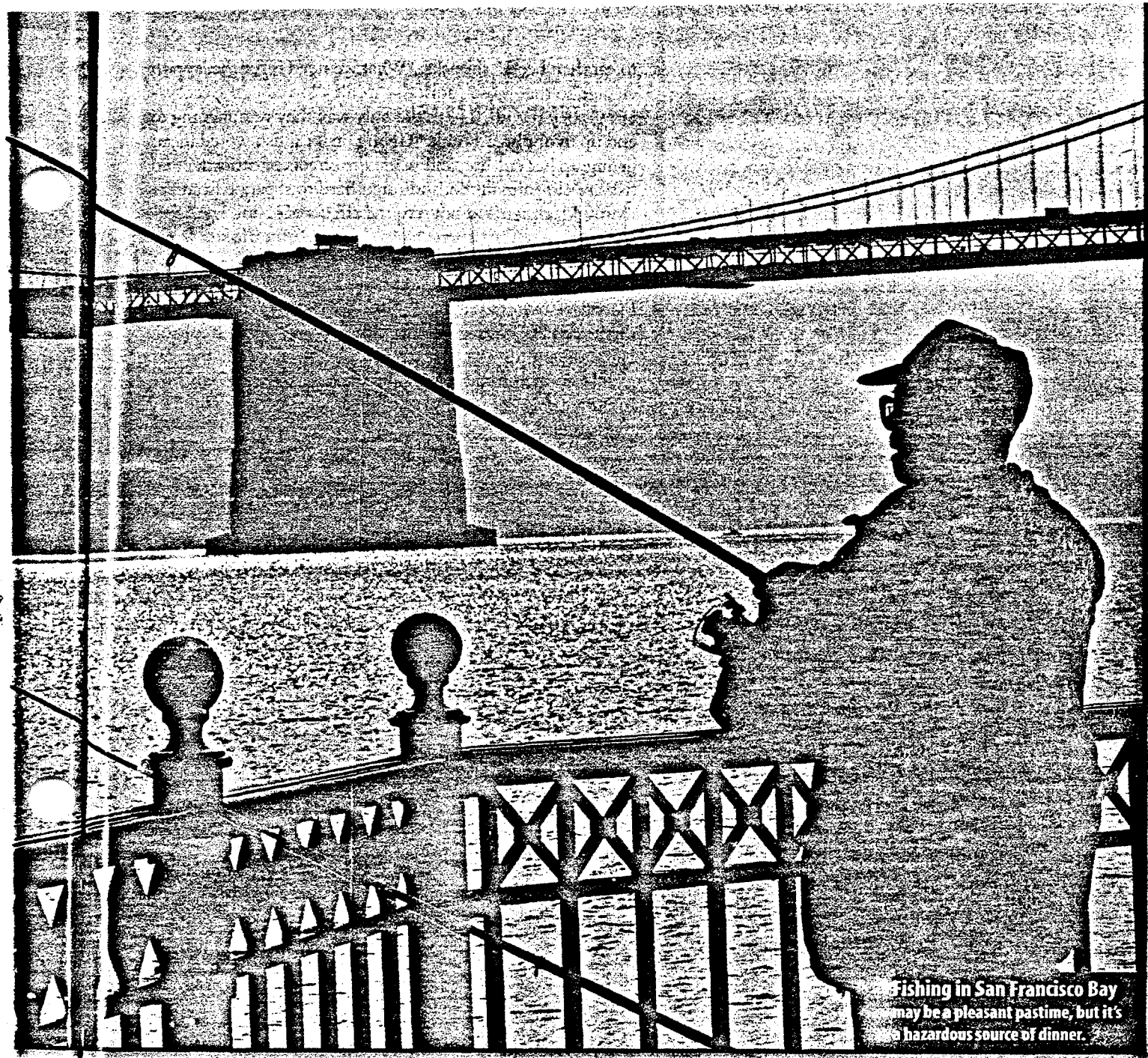


# fishing for life

Thousands of Americans face the choice  
of eating contaminated fish or not eating at all.



**Fishing in San Francisco Bay**  
may be a pleasant pastime, but it's  
also a hazardous source of dinner.

**It's a soft spring twilight by the edge of** Lake Superior at the far northern tip of Wisconsin. Swans pass overhead, and a red fox watches from the woods. I sit with Judy Pratt-Shelley, a member of the Red Cliff Band of Lake Superior Ojibwe, and her sister Lynne Basina, gazing out across the lake toward Madeline Island, the spiritual hub of the Ojibwe people.

"Do you have any place this beautiful where you come from?" Pratt-Shelley asks. This land and water supply everything her people need, she explains: fish and venison, wild leeks, morels, chanterelles, hazelnuts.

Now, however, the fish are contaminated **BY PAUL RAUBER**

with PCBs, mercury, and other poisons. Some of the pollutants come from hundreds of miles away, some from the coal-burning power plant (and Superfund site) at Ashland, 20 miles across Chequamegon Bay. Tribal and state health officials warn that eating too much of the fish can have serious health effects.

The Ojibwe are torn between science and tradition. "We don't need people to tell us, 'Don't eat the fish,'" says Pratt-Shelley. "This is a guaranteed, federally reaffirmed right that we retained in our treaties when we ceded this territory: the right to hunt, fish, and gather. Those things are offered as gifts by Mother Earth for me;





I've got to have them as part of my food so that my body and my spirit can be complete."

The unification of body and spirit is not something contemplated by Wisconsin fish advisories. Henry Anderson, the affable chief medical officer for the state division of public health, recommends that children and women of reproductive age limit their intake of pan-fish like perch or whitefish to one meal a week, and larger predator fish like walleye or pike to one meal a month. That's for Wisconsin's 15,000 smaller lakes—every one of them contaminated by mercury, much of which comes from the state's 16 coal-burning power plants. For Lake Superior, where polychlorinated biphenyls (PCBs) are a greater issue, the advice varies by type and size of fish. "We really don't think some of the very large fish and the lake trout should be eaten at all," Anderson says.

As a biologist, Judy Pratt-Shelley is well acquainted with fish advisories, and can explain the mechanics of how human muscles incorporate methylmercury. She switched to whitefish, she says, when pregnant and nursing, and makes sure her kids eat only the smaller fish. Still, she is happy to have weaned her daughter: "Now that I'm done nursing, I can eat all the poison fish I want."

It's only half a joke. "Who's to say that fish is more risky

to eat than beef?" she asks. "What we need is for the laws to change so that those [poisons] aren't allowed in the ecosystem to begin with. That's the only way they're not going to end up in our breast milk." Giving up local fish would mean giving up her culture, and while the effects of eating tainted fish are chronic, subtle, and often hard to separate from the manifold ailments of poverty, the effects of losing one's culture are there for anyone to see: alcoholism, broken families, drifting children.

Pratt-Shelley's view is widespread among Native people. Patricia Cochran, an Inupiak from Nome, is a member of the Alaska Native Science Commission: "It shouldn't be us changing our behavior patterns," she tells me, "as much as changing the behavior patterns of those who are inflicting this upon us." The chief sources of the extremely high levels of mercury in arctic fish and marine mammals are coal-burning power plants. Recent studies from the



**For Judy Pratt-Shelley, fishing in Lake Superior is part of what it means to be Ojibwe. "Even knowing the toxics are in there, I'm not going to quit eating fish."**

Faeroe Islands and New Zealand show alarming neurotoxic effects from even low doses of mercury, including delays in mental development as well as chronic effects like increased heart-attack risk. According to the Centers for Disease Control, 10 percent of American women of childbearing age now have blood mercury levels high enough to endanger a fetus should they become pregnant.

Highly volatile PCBs also precipitate out in the Arctic, where they concentrate in the fat of marine mammals and the breast milk of Inuit women, which can contain five times as much PCB as that of women in southern Canada. A family of 209 compounds, once widely used as an insulating fluid, fire retardant, and even in plastic eyeglasses, PCBs are

## "Fishing is one of the few things you can do to get yourself outdoors away from concrete and buildings."

linked to cancer, endometriosis, hyperthyroidism, and early puberty, as well as neurological and behavioral problems and intelligence deficits. Lodging in the body through inhalation as well as ingestion, PCBs can be detected in every person on Earth.

Well-meaning public-health officials and scientists suggest that Alaska Natives and other subsistence fishers stop eating contaminated fish. But being a subsistence fisher means you don't have a choice. "In our communities," explains Cochran, "where ninety percent of the diet is taken from subsistence foods and there is not much of a cash economy, the supermarket is when you open your front door. There is not an alternative life for us. We will live subsistence or we will die."

**Like dead fish rising to the surface, poisons** dumped down drains or pumped into the wind return again—often on the plates of the poor. Those occasionally dining on sea urchins or *truite au bleu* aren't the ones who have to worry: It's the folks trying to feed the family for a week on that big bluefish or muskie who ingest the chemicals capable of dulling the wits, confusing the sexual organs, or sparking the cancer.

The Clean Water Act of 1972 promised better: "fishable and swimmable" waterways for every American. Similarly, solemn treaties guaranteed Native Americans the right to fish in perpetuity. Both pledges have been abrogated, however, by the combination of old industrial spills and continuing pollution. In large parts of the country, catch and release is not for the fish's sake: Last year, 48 states issued fish advisories covering 63,000 lakes, 325,000 river miles, all of the Great Lakes, and all of the Gulf Coast. That means that fish from those waters are not safe to eat in unlimited quantities.

For many years, warnings about contaminated fish have focused on sport anglers out for the weekend with a case of Molson and a lust for bass. Slowly, attention is coming around to the hundreds of thousands of Native Americans, new immigrants, and inner-city African Americans and Latinos who eat wild fish as a regular—sometimes central—part of their diet, and who therefore ingest far more toxics than the typical sport fisher.

Yet public-health officials are learning that it's not enough to put up signs at public fishing piers. At an EPA conference on "risk communication" in May, Kerry Pflugh of the New Jersey

Department of Environmental Protection recalls her encounter with a family who had ignored signs warning against crabbing in the Hackensack River: "They had removed the sign and placed it on the fire. It held up a pot full of Hackensack River water and crabs. So we learned that signs can work—they make good grills."

From the point of view of, say, a new Hmong immigrant to this country, it would be hard to construct a less plausible reason for not eating the delicious, plentiful fish that you can catch for free: an invisible substance that may (or may not) cause chronic illness sometime in the future. Josee Cung frequently encounters this skepticism in trying to communicate the risk of eating Minnesota fish to the state's 130,000 Southeast Asian newcomers. "Their assumption is that if it's alive and shiny, it's safe to eat," she says. "Their main concern is where to catch the most fish. They have very little understanding of contamination by pollution, and fish without the slightest attention to advisories."

Joanna Burger, an expert in subsistence fishing at Rutgers University, notes that many people also ignore health warnings because they distrust the government—assuming, for example, that it's trying to protect the commercial fishing industry. Besides, she says, "In many places, fishing is one of the few things you can do to get yourself outdoors away from concrete and buildings. If you go out in a little rowboat in Arthur Kill, you see an entirely different perspective: water, mudflats, marsh hawks, a reasonable ecosystem."

On the Pacific Coast, a study released this March by the California Department of Health Services found that one in ten people who fish in San Francisco Bay, badly contaminated by PCBs and pesticides, eats more than

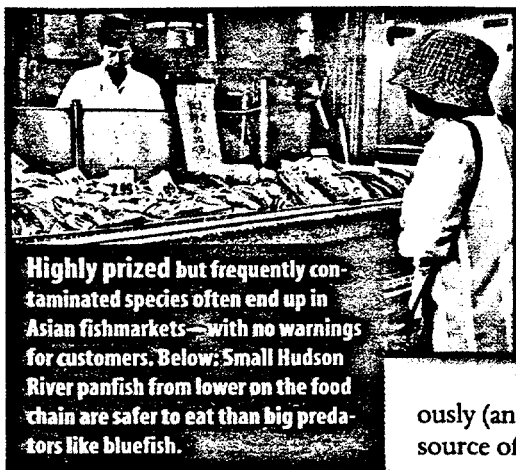
Red Cliff tribal member Joe Duffy is among a dwindling number of commercial fishers on Lake Superior.



the prescribed limit. Asians were most likely to do so, and were at particular risk because of their cultural preferences for white croaker (a toxic sponge of a fish) and for eating the fish skin and cooking juices, in which contaminants often concentrate. One stumbling block to putting up warning signs in the Bay Area was as prosaic as finding someone who could type-set Chinese, Cambodian, and Korean. In addition, the Cambodian translation turned out to be in the wrong dialect and thus completely offensive to its target audience.

"Signage is not the best way to communicate," concludes Christine Arensen, who worked on the San Francisco study. Today, the wordy, complicated warning sign on the public fishing pier in nearby Berkeley is covered with graffiti anyway. Many of the other signs around the bay have been taken down and sold for scrap.

**In the end, the only problem fish advisories** solve is that of informed consent. People have a right to know the risks involved in what they eat, but they have an even more fundamental right not to face those risks in the first place. That message prevailed this year in New York's



Highly prized but frequently contaminated species often end up in Asian fishmarkets with no warnings for customers. Below: Small Hudson River panfish from lower on the food chain are safer to eat than big predators like bluefish.

Hudson valley, where the nation's largest toxic site is finally on its way to being cleaned up.

In the middle decades of the last century, General Electric dumped more than a million pounds of deadly PCBs into New York's sparkling, fish-thronged Hudson River. Ever since it was ordered to stop pouring its waste into the river in 1977, GE claimed vari-

ously (and falsely) that it was not necessarily the source of the PCBs; that they weren't that poisonous anyway; and that even if they were, the

sedimentary sludge at the bottom of the river would safely bury the problem forever.

Yet up the PCBs continue to come, stirred by floods, currents, and the churning ice floes of winter, decades after they were dumped. Every year, up to 500 pounds of PCBs wash over the top of the Troy Dam above Albany, contaminating river life for 154 miles down to Battery Park in New York City and beyond. Upriver, where the now-shuttered GE plants were located, conditions are far worse, and the EPA has identified 40 toxic "hot spots" that warrant dredging. PCBs killed the Hudson's once-thriving commercial fishery, which has been closed for almost 25 years to everything except seasonal shad. It is now illegal even to possess fish above Troy Dam; below it, women of childbearing age and children under 15 are urged to abstain from fish, and others to eat no more than one meal a month of most aquatic species.

All of which is news to the guys fishing off the West Harlem Pier at 125th Street. "I haven't heard nothing about no pollution problems here," says Wilson Rosario, hanging out with his friends hoping to catch a striper. (No wonder: No advisory signs are posted at the popular fishing spot.) Bobby Michaels, a Puerto Rican in his 20s, says he had heard something from a college-newspaper reporter who interviewed him: "She said the Hudson ain't no good—something about 'PAB' or something. But I've found these fish is good."

In the back of his beat-up van is a snapping turtle he caught the other day. Since PCBs accumulate and magnify as they work up the food chain, long-lived top predators like turtles have been known to contain PCBs in thousands of parts per million. (By comparison, the FDA issues consumer warnings about fish containing one part per million.) Do people really eat turtle? "Sure, people eat turtle stew," says Michaels. "You didn't know that?"

Malion Walker, on the other hand, took a keen interest in pollution issues. A very large African-American musician with the inevitable nickname of "Tiny," he's fished in the Hudson two to three times a week for over 20 years. In the past, he says,







Sierra Club Hudson River  
activist Aaron Mair  
challenged General Electric to  
clean up its PCBs.

## "I have been fighting with every ounce of Captain Ahab's fury going up against Moby Dick."

"I wouldn't eat the fish at all because there was raw sewage in the water—feces. Then they closed the sewers due to the Clean Water Act that Richard Nixon signed. Maybe he died and went to heaven for that, who knows?"

If Nixon is in heaven, it isn't for signing the Clean Water Act, which actually passed over his veto. Tiny is also mistaken in his belief that it's possible to tell when a fish is contaminated with PCBs: "There are tumors on the fish, lumps all over the fish's body," he opines. While there is actually no way to see whether a fish is contaminated with PCBs, the fact that it comes from the Hudson ensures that it is.

A few blocks up from the West Harlem Pier, within shouting distance of the Apollo Theater and Bill Clinton's new office, is West Harlem Environmental Action, presided over by Peggy Shepard, a slight, serious woman who has seen it all and is trying to do something about a lot of it. Her group was born opposing the sorts of noxious projects that are often sited in communities like Harlem: a massive sewage treatment plant, a diesel-belching bus depot. Warning peo-

ple about contaminated fish is just a sideline.

"Some people are fishing for sport—it's just how they spend their time. There are some who are catching crabs, and they're clearly going to sell them. And some are fishing to eat." Most, she says, are pretty vague on the safety of the fish; with the raw sewage of years past cleaned up, many assume all is well. New York State does have fish advisories, but they're only handed out when you get a fishing license, and you don't need a license to fish in the Hudson. So Shepard's group does its best to pick up the slack, passing out leaflets to folks fishing in the polluted waters.

"We try to explain the health impacts, why women of childbearing age shouldn't eat it. But to get into how many pounds you should eat per week—I don't know if people follow that. To me, you just shouldn't eat it."

**Aaron Mair isn't willing to give up his fish** without a fight. "I'm willing to rage, man," he says as we drive up the Hudson toward Albany. "That's what it's about, being

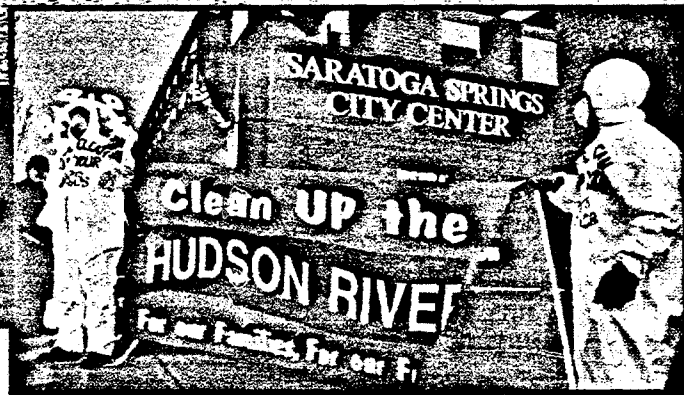
willing to take the system on." Tall, powerfully built, intense, and eloquent, Mair is president of the Arbor Hill Environmental Justice Corporation and environmental-justice chair for the Atlantic Chapter of the Sierra Club. In the early 1990s he went up against a trash incinerator that spewed thick black soot over his Albany neighborhood of Arbor Hill and may have caused his daughter's asthma; a lawsuit shut down the plant and won a settlement that financed the Arbor Hill EJ Corporation. But that battle was just a warm-up for his combat with GE, against which, he says, "I have been fighting with every ounce of Captain Ahab's fury going up against Moby Dick." (Herman Melville, he points out, also lived in Arbor Hill.)

Like many African Americans coming up from the South, Mair's grandparents settled in the old industrial corridor along the Hudson, and found in the river a tie to their heritage. "Southern Baptist culture is river culture," says Mair. "Southern cuisine, that's catfish. Rivers play a spiritual role: People baptize themselves, anoint themselves in their religion through the river. And as they came north fleeing racism and seeking jobs and economic parity, they brought that river culture with them intact."

In Peekskill, where Mair grew up, we stop for a nostalgic tour of the waterfront where he learned to swim and fish: "It was an era when black families congregated and had their weekend cookouts," he recalls fondly, "where fathers and sons would pass on the southern tradition of fishing and bonding right here along the Hudson River. Unfortunately, it's something I'm not able to pass on to my daughters."

Mair and other environmental-justice advocates are widely credited with shifting the PCB debate from technical details of sedimentation and suspended particles in water columns to the loss of river culture and the effects of PCB contamination on subsistence fishers. A 1999 EPA human health risk assessment said that people eating an above-average number of upper Hudson River fish faced a cancer risk ten times greater than the highest level allowed under Superfund; the cancer risk to those eating a meal of such fish each week was 1 in 1,000. And a 1998 state health department survey found that only half of the tens of thousands of Hudson anglers were

This abandoned General Electric plant at Hudson Falls was a major source of the PCBs now contaminating the river. Protestors demanding a cleanup won a victory in August when the EPA ordered GE to dredge up its poisons.

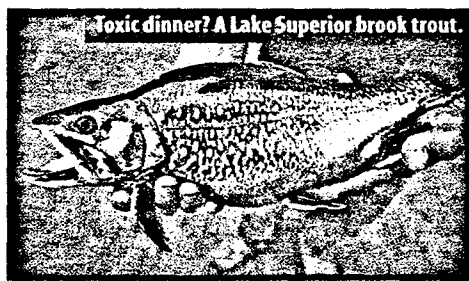


aware of the health warnings.

"It's one thing when you have a choice, another thing when you don't," says Mair. "Cigarette smoking is a personal choice, but the need to eat is biological. If you have no alternative, a sign telling you not to eat the fish is not enough."

**When I visited the Hudson in May, GE was** waging a desperate, \$60 million campaign to win public support for its do-nothing approach. Its ads blanketed television, radio, newspapers, and billboards: "Let Nature Clean the Hudson, Not the EPA." In attempts to win the favor of upper Hudson communities (mostly white, and well larded with GE retirees), the company was handing out money right and left. For example, it bought new computers for schools at Ft. Edward, site of one of the leaky GE capacitor plants. According to David Carpenter, neurotoxicologist at the SUNY Albany School of Public Health, exposure to PCBs in the womb can lead to IQ deficits of four to seven points, so the gift could be seen as an act of penance by GE. The company, says Mair, had made upstate New York into the opposite of Lake Wobegon: "where all the children are below average."

Flipping channels on the motel TV, I happened across the bumptious presence of GE chair Jack Welch (now retired) speaking to an adoring audience of business school students. Dredging the river to get rid of PCBs, Welch asserted, would be "the dumbest idea in the world" and would only



# GE's Jack Welch: "The world didn't know in the 1950s and '60s that PCBs might cause a problem." That was a lie.

serve to please "some silly environmentalists and the state of New York." He wasn't even willing to acknowledge that GE had ever done anything wrong. "The world didn't know in the 1950s and '60s that these things might cause a problem," he said. "We still don't know."

That was a lie. General Electric learned that PCBs were deadly in 1937 after three workers exposed to the substance died of acute liver damage. "The first reaction that several of our executives had was to throw [the PCB] out—get it out of our plant," said GE official F. R. Kaimer in a 1937 meeting. "But that was easily said but not so easily done." (See "Pandora's Poison," September/October 1994.)

And if Welch still doesn't know that there's a problem with PCBs, it can only be through willful ignorance. "At a purely scientific level, the evidence is overwhelming," says neurotoxicologist Carpenter. The International Agency for Research on Cancer, the World Health Organization, and the EPA all classify PCBs as probable human carcinogens, a designation that GE suggests reflects some doubt. What little doubt there may be, however, results from the unlikelihood of finding human subjects who would consent to being dosed with a known poison.

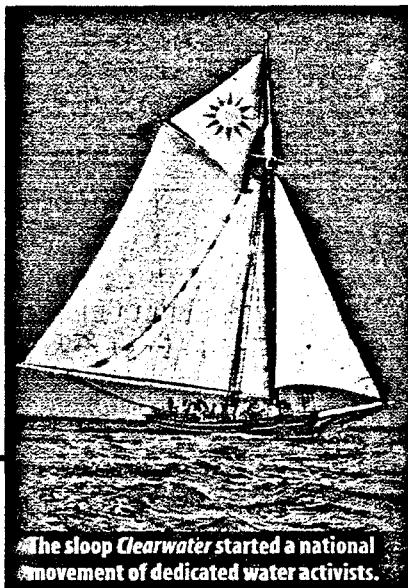
Last December, one Frank Rice wrote a letter to the *Albany Times Union* sug-

gesting an elegant solution to this problem. "Based on its expressed confidence in its own data," he wrote, "GE should have no problem finding 2,000 volunteers from the ranks of upper management, their environmental scientists, and their public relations and legal departments" to participate in an experiment. Half would be given placebos, and half would be given PCB pills. "If there are no health effects," he concluded, "then we don't need to dredge."

GE management was spared that experiment in August, when EPA administrator Christine Todd Whitman put public health ahead of corporate profits and ordered GE to dredge its pollution from the Hudson. "We still need to make sure the cleanup's done in the right way," says Chris Ballantyne, director of the Sierra Club's Hudson River

Campaign, "but it's a monumental victory." The EPA calculates that removing 100,000 pounds of PCBs from the river will reduce hazards to humans and wildlife by 70 to 90 percent. Fish advisories are expected to be relaxed within two years after cleanup and will be totally removed within a generation. Parents will once more be able to teach their children how to fish by a living river, and body and spirit will be complete again. ■

PAUL RAUBER is a senior editor at Sierra.



The sloop *Clearwater* started a national movement of dedicated water activists.

## CLEAN WATER WATCHERS

In tugs and sloops and rowboats, citizen watchdog groups have launched a campaign to protect America's waterways. The fleet includes autonomous organizations like WaterWatch, the Stream Team, Clearwater, and Surfrider, as well as the 70 chapters of the Waterkeeper Alliance. The movement began on the Hudson River in 1966, when folksinger Pete Seeger conceived the idea of using a 106-foot Dutch sloop, the *Clearwater*, to call attention to the river's plight. In 1983, the first full-time riverkeeper was hired on the Hudson. Since then, scores of other groups have organized to make good the Clean Water Act's promise of fishable, swimmable waterways. "We have some excellent water-quality laws on the books in this country," says Scott Dye, director of the Sierra Club's new Water Quality Monitoring and Enforcement Program. "They just aren't enforced."

The water monitors operate on a simple principle: People care about the streams, bays, sloughs, and coasts near their homes, and often know more about them than anyone else. With the proper equipment and training, they can be their waterways' most effective advocates.

"What we're doing is acquiring data," says Dye. "Agencies are all underfunded, all understaffed, and all slip into bureaucratic malaise. But even if the

state doesn't collect the data, it has to pay attention to it."

In the Waterkeeper Alliance, each of the constituent groups—Baykeeper, Riverkeeper, Deltakeeper, and so forth—has a full-time ombudsperson, or "keeper," who watches over the local waterway through on-the-water patrols, water-quality enforcement, and environmental education. Keeper tactics vary from donning hip waders to swimming the 1,243 miles from the headwaters of the Columbia to its mouth, as Columbia Riverkeeper Chris Swain plans to do next June to raise awareness and money for the river he loves.

The aim of all these efforts is to involve citizens in the health of their local waterways. "There is nothing more terrifying to a decision-maker or a bureaucrat than an informed populace," says Dye. "It can move regulatory mountains."

You can contact the Waterkeeper Alliance at 78 North Broadway, E Building, White Plains, NY 10603; (914) 422-4410; [www.keeper.org](http://www.keeper.org). For more information on the Sierra Club's Water Quality Monitoring and Enforcement Program, contact Scott Dye at 1007 N. College, Suite 1, Columbia, MO 65201; (573) 815-9250; [scott.dye@sierraclub.org](mailto:scott.dye@sierraclub.org). For information about other water issues, visit the Sierra Club's Web site at [www.sierraclub.org/cleanwater](http://www.sierraclub.org/cleanwater).

—Karen Levy