BY ERIC HOFFMAN

Saving the Steelhead

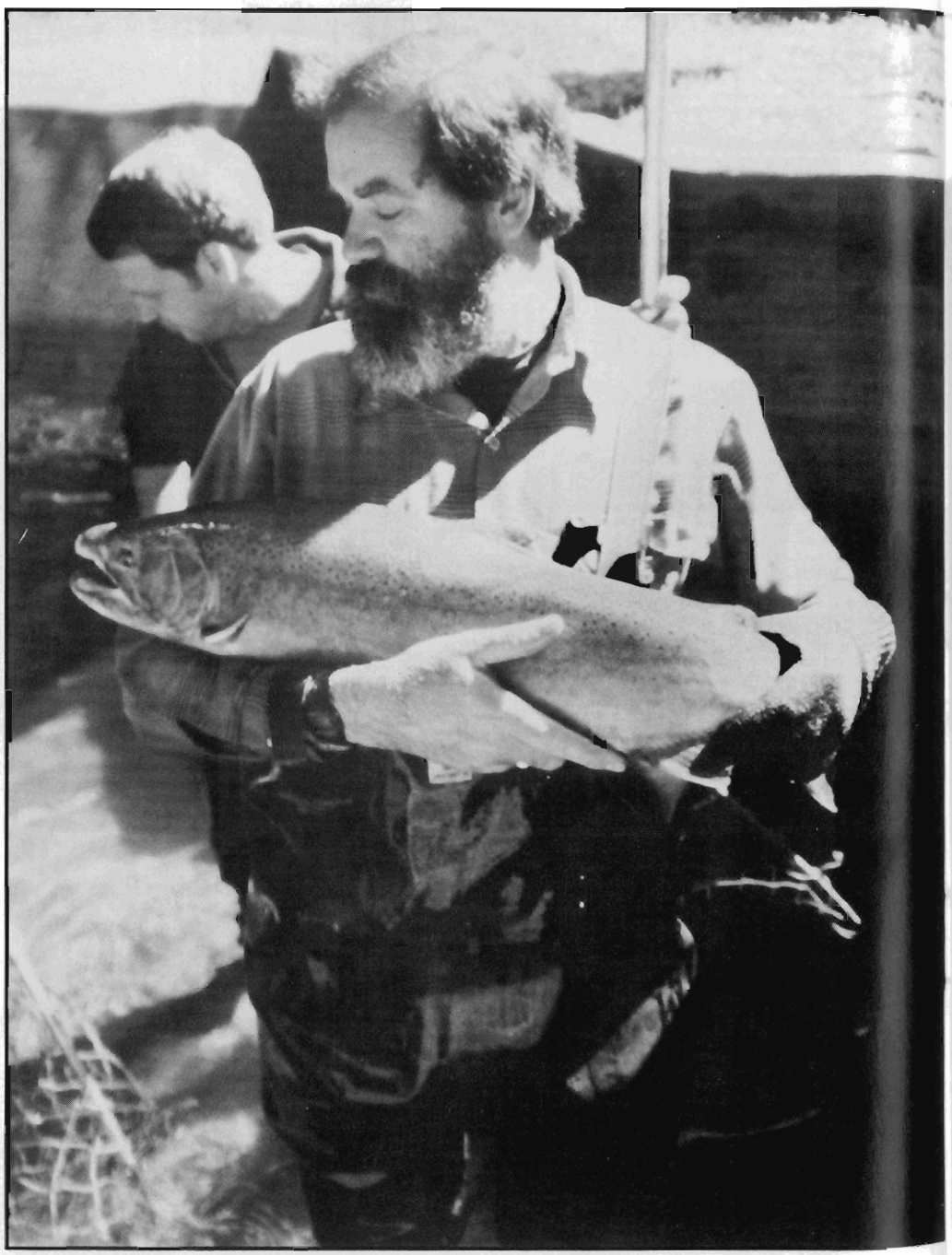
While the future of the native salmon looks bleak, their anadromous cousins, the steelhead trout, stand a good chance of being saved.

Retired businessman Dick Wehmer is an avid fisherman, and is known in Santa Cruz fishing circles for being as good as they come at coaxing a salmon or steelhead into taking his lure in the San Lorenzo River.

But these days anybody looking for Wehmer is more apt to find him counting steelhead eggs or pitching in to build hatchery ponds at the King Fisher Flat Steelhead Fish Hatchery tucked away in a rugged coastal canyon north of Santa Cruz.

It's not that Wehmer's fish-finding faculties have diminished. They're as good as they ever were, maybe even better than the day in 1982 when he finessed a 15-pound steelhead on light tackle from the San Lorenzo River.

Recently Wehmer waded into Big Creek near Davenport to show his fisherman buddy, Pat Totaro, an extremely rare fish, a silver salmon. Once plentiful in the streams north of Santa Cruz, this one was only one of three native males to return to Big Creek this winter to fulfill its final mission of propagation.



In fishing jargon, male salmon are known as "bucks" and females are called "hens." To the disappointment of Wehmer and others, there are only bucks and no hens. The buck Wehmer flushed out by prodding the underside of a snag with a stick is, at first glance, a 30-inch streak of silver and pink, but when it pauses you can see the telltale white and gray splotches that signal it only has weeks to live. The fish will die according to nature's clock, but with its mission unfulfilled. Native salmon are probably — like the California condor -- doomed, and the male fish Wehmer located may be the last vestige of ageless salmon runs that have steadily

petered out during the last 30 years in all the rivers and streams that feed the Monterey Bay.

By all accounts, the future of native salmon looks bleak. But thanks to the efforts of a small group of private citizens, the local populations of steelhead trout, their anadromous cousins — fish that are born in fresh water, live in the sea, and return to their fresh water birthplaces to spawn — stand a good chance of being saved. Locally, anadromous species are silver salmon and steelhead.

Steelhead can lay for four years before dying, but salmon die after a single laying. Greater breeding longevity in steelhead may account for their greater numbers during adversity while native salmon have all but perished.

Just how well the steelhead will do depends on a combination of sporadic funding, support from fishermen's associations, dedicated scientific know-how, and always-fickle natural elements.

Largely due to clever manipulation of what fish remain and plenty of hard work, steelhead are increasing in numbers. The project has steadily picked up steam since its inception in 1975. The diligence of the project biologist Dave Streig, volunteer work efforts, donations of materials and land, have been supplemented with a $16,000 grant from the Packard Foundation. It has all added up to a dramatic reversal of the downward trends in steelhead populations.

About 50 volunteers take turns driving up Highway 1 to Swanton, past the turn-of-the-century McCrary homestead, to the King Fisher Flat Fish Hatchery. The McCrarys, whose Swanton ancestry dates back to the 1840s, donated the land and materials for the project, officially dubbed the Monterey Bay Salmon and Trout Project. The volunteers do everything from counting the eggs of freshly milked hen steelhead to constructing ponds. All told the Monterey Bay Salmon and Trout Project has put over 350,000 fish in the San Lorenzo and Pajaro River systems and many of the creeks surrounding the Monterey Bay.

Lud McCrary likes to talk about the efforts to save steelhead on his family's land. His perspective and goal for the fish would get a nod of approval from everyone involved in the project. McCrary: "I'd like to see the population back to where it was when I was a kid, hopefully more than when I was a kid."

McCrary can recount childhood memories of the 1930s. During The Depression his uncle poached salmon at night with a long pole and gaff hook by "feeling" the fish and plucking them from the local streams. His uncle fished for pragmatic reasons: to feed his family. He fished at night for other reasons: to avoid McCrary's grandfather who was the part-time warden in the area. McCrary can also remember a rich fish smell from rotting flesh of spent salmon that filled the deep, quiet redwood canyons along the North Coast, but not since the 1950s.

It's not known for sure what forces are responsible for the hard times experienced by the salmon and steelhead locally. The list of possible culprits is long. Commercial fishing operations may have had an impact. Silting and alteration of river systems due to human activities is a probable factor. Toxicity problems that have plagued so many marine life forms can't be overlooked. And, long-term climatic changes, punctuated with events like El Nino, may have played a part.

Nobody knows for sure because no studies were undertaken until recently, and the salmon are essentially gone. Trying to make sense of what has gone on historically in terms of numbers is nearly impossible. Even though the California Department of Fish and Game has operated along the Central Coast since the 1930s, their records of fish counts have been lost.

Where bureaucratic paper shuffling accomplished little, perseverance of citizen-fishermen like Dick Wehmer and Pat Totaro seems to work. The program receives less than 50 percent of its funding from state sources. The fish have plenty of boosters from the private sector. Superior Court Judge Bill Kelsay and former Santa Cruz Supervisor Dale Dawson are among the many who have put in countless hours constructing ponds and collecting donations for their cause.

But, if fish could talk they'd probably point to Jack Harrell, Dave Streig and the McCrarys as the most essential cogs in their revitalized water wheel. Not only did the McCrarys supply the land and materials, they also kept Big Creek in a near-pristine state, supplying the hatchery with a ready source of native fish.

Jack Harrell, whose paid job encompasses all aspects of maintenance of the Santa Cruz wharf, has spent thousands of volunteer hours rebuilding check dams, stringing nets above breeding ponds to keep herons from swiping the precious steelhead, and overseeing construction of a new hatchery building.

But all the efforts are for naught without a healthy dose of good management, and that responsibility falls to biologist Streig, the project's only paid employee. After spending a few minutes with the affable Streig, it is clear he is doing more than just a job. His ancestry dates back six generations in the Pajaro Valley. Like the McCrarys, Streig remembers stories from past generations when salmon and steelhead were plentiful. He thrives on the success of the fish he nurtures. "It makes me feel good to see the fish we've tagged return. That's why winter is my favorite season at the hatchery. Last year over 50 percent of the fish caught in the San Lorenzo were from the King Fisher Flat Fish Hatchery, and this year the number will be over 75 percent. I think we can be proud of that."

A great deal of Streig's success is due to his understanding of the subtleties of managing local fish populations. Unlike the California Department of Fish and Game, which has generally operated under the assumption that all salmon and steelhead are nearly the same, Streig sees things differently. While Fish and Game tackled salmon and steelhead projects throughout the state with a single centralized hatchery on the Mad River in Humbolt County, Streig sees great value in a regional approach. Interestingly, the State's efforts at restocking worked well in the northern part of the state, but not so well on the Central Coast.

It's hard to argue with success. Streig's emphasis on a regional approach, one that develops native strains rather than relying on non-native forms, has worked well. "Apparently our native populations have subtle survival adaptations that allow them to cope with higher water temperatures and adjust to unique aspects of our river and stream systems," he says. "Fish of non-native genetic origins don't do very well." Additionally, planting fish from outside the area may even harm struggling local populations. "When fish that don't do as well breed with our local population, they weaken the genetic make-up of the local fish and hurt their ability to survive," Streig adds.

With this reasoning, he has developed a regional hatchery approach that gathers eggs from existing fish, safely guards them and raises them to insure that the maximum possible fish survive.

The actual work of creating tens of thousands of fish is, in two words, tedious and unending. Steelhead and salmon are among the most difficult fish to raise in an artificial setting. The water temperature must be kept low because if it rises in a hot spell, the fish weaken and are susceptible to any number of diseases that can kill off a whole season's work in a few days. "That's why the Big Creek site is so good," Streig explains. "The water temperature usually stays between 45 and 58 degrees which is optimum for these fish." But when hot spells sweep through the area, the respiration rate of the crowded fish rises, quickly depleting the oxygen supply needed in vast amounts in order for them to survive. Streig then revs up the immense generators that pump air through the ponds. "It's a never-ending task when we (people) assume the role of Mother Nature."

Streig, who can be found at the hatchery from five to seven days a week, has had some nervous moments with his slippery charges. He came to work one morning and found 40 piles of young salmon and Great Blue Heron tracks around the hatchery ponds.

In the middle of winter when many people would find the tree-shrouded, mossy canyons like Big Creek too dank and depressing, Streig, in his rubber wader work attire, is all smiles. "This is what it's all about. There's water in the streams and the fish that we sent to sea years earlier come home so we can help them lay their eggs. Just yesterday I milked hen #119 and got thousands of healthy eggs. She grew from 27 to 29 inches and increased her weight from 8¾ to 10½ pounds during the last year." Streig put her back into Big Creek and hopes she'll return next year. In the meantime, he has tens of thousands of eggs to watch over.