

More oil for



Against the beauty of the Golden Gate Bridge, globs of oil-soaked hay drift with the tide (above) while two young Californians (right) scoop a taffylike mass of oil from the beach at Bolinas.

It was nearly 2 in the morning. The fog lay solid as a wall across the mouth of the bay, under the Golden Gate Bridge. Two Standard Oil of California tankers groped through that fog—and one, at least, watched the other on radar but at the last moment they were somehow unable to avoid a collision. Forty feet of the bow of the *Arizona Standard* sliced into the side of her sister ship, the *Oregon Standard*.

Five days later on the other side of the country in Long Island Sound, the 685-foot *Esso Gettysburg* nosed through a light predawn fog, searching out the narrow entrance to New Haven harbor. Somehow she missed one boundary of the channel, and a gentle brush against an unyielding ledge ripped several gashes in her hull.

In San Francisco the gap in the *Oregon Standard* sent 840,000 gallons of syrupy bunker oil pouring into the bay. Part of it remained there, to slosh back and forth like water in a basin, fouling first one side of the bay and then the other. The great mass of the oil rode out under the bridge on the tide to come ashore as far as 20 miles north and 20 miles south.

In New Haven 361,000 gallons of light #2 heating oil leaked into the harbor before the *Gettysburg* reached dock and a protective skirt was hung around her flanks.

As the following pages show, expert professionals and dedicated amateurs know exactly what to do once a spill happens. But nobody yet knows how to prevent it from happening.

Photographed by **GEORGE SILK**



our troubled waters





Longhairs and hardhats, San Francisco



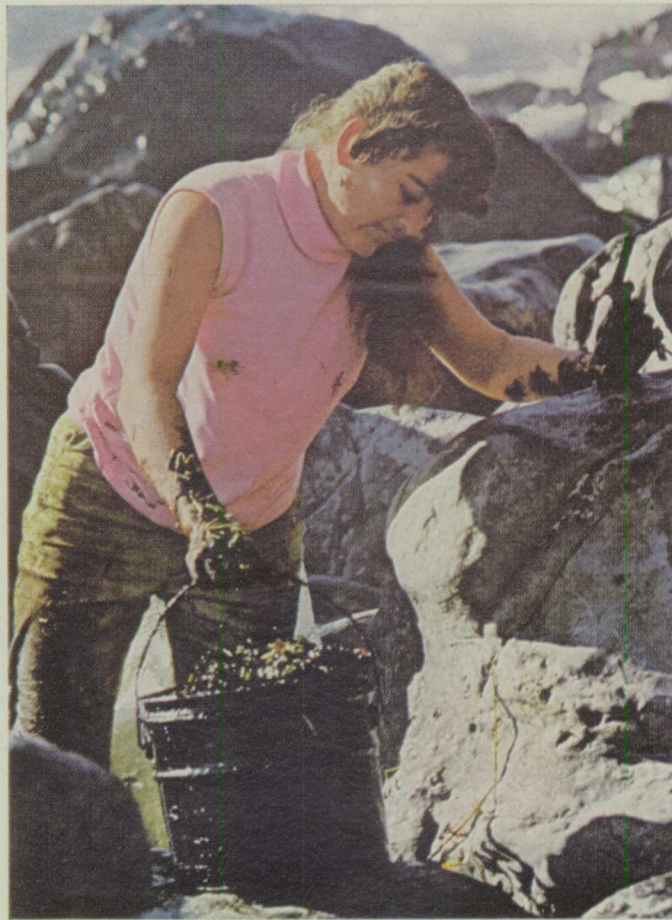


itches in

A girl from San Francisco said, "It's the freaks who are out here. The so-called all-Americans don't give a damn."

She was wrong. The long-haired and bearded young were indeed all over the beaches, but they had no monopoly of concern. Standard Oil of California turned out 700 of its employees, like the hard-hatted Chevron worker above, to help organize the beaches and provide supplies. Contractors brought in bulldozers and payloaders and trucks—to clear the beaches of oily straw that had been tossed onto the slick to soak it up. Whole families spent hours wading into the water after foundering sea birds. Others opened their houses and offered food and rest to the volunteers.

Still, it was the young, the hip, the ones so often faulted for dropping out, who set records of devotion to the environment. Flat on their bellies they scabbled under rocks to pull out handfuls of oil-soaked straw, then carefully carried it in buckets to a central pile. For days they watched over whole beaches, splitting their numbers into organized crews, fending off the curious who might frighten drowning birds away from the haven of the shore. They worked through the night under lights and then, like the girl wrapped in a blanket at night, caught an hour or two of sleep as the dawn brought a trace of warmth to the beach.





At Bolinas beach many waterfowl were sitting just outside the first line of breakers, like a bunch of surfing kids waiting for a big wave. They were in trouble, flapping frantically and making doglike shaking motions as they tried to rid themselves of the oil.

As the sun began to set, the birds made the decision to try for the safety of the beach. A loon and a grebe came first, starting in after a big set had subsided. I thought they were doing fine, but halfway in they hesitated—probably because of some movement they had seen on the beach—and were engulfed by the next big set. They dived and I watched anxiously for them to reappear. After the first two waves they took longer and longer to surface. It was heartrending to watch their struggle. Finally, they were headless blobs floating on the water. Gone were the proud curving necks and the perky heads. Gone was any sign of life. They had drowned.

Almost at dusk, one made it all the way. He was a very sick duck when his feet touched the sand, and several small waves washed over him as he rested, trying to find the energy for the last 10 feet.

A dozen flops and he was clear of the waves, trying to stand, flap and shake himself, but I could see it was doing no good. His feet were glued to his tail, and the feathers on the trailing edges of his wings were a jagged mess, stuck together in clumps. He was utterly spent, and a young man with a cardboard box had no trouble at all picking him up.

At the cleaning station, an old sock is placed over the bird's head to quiet him. His beak protrudes through a hole so he can breathe. The cleaning is a messy business. First the bird is bathed like a baby in a bath of mineral oil, then rubbed down with masses of cornmeal and flour. This process is repeated until he is clean, but by that time the already exhausted bird may be almost dead. He is then wrapped

in swaddling rags and placed in a warm room, where he will be picked up and transported across the bay to the Richmond Ecology Bird Bath Center.

Here, the bird must be force-fed each day with small fish, and literally taught how to drink, as seabirds are not used to drinking out of flat pans on the floor.

Many die on the way to Richmond, and many more die there each day. When you consider that the survival figure from the spill two years ago at Santa Barbara was less than 3% of all the birds treated, you have to wonder if it's not all futile.

Any material developed so far that will clean the birds also breaks the surface tension of their feathers by removing their own natural oil. So the bird cannot be released until he grows new water-repellent feathers. By that time, however, his flight muscles have degenerated so badly that he can't fly.

James L. Naviaux, a northern California



The odds for the birds were bitterly small



Oil booms, strung across the mouth of the Bolinas Lagoon bird sanctuary 20 miles north of San Francisco, protected thousands of migratory birds. The two grebes (left), caught outside the boom in a slick of oil, were picked out

of the water but still face a doubtful future: only 3% of rescued birds are likely to survive. The crab above is doomed. The duck below may also be, although it was picked up by rescuers moments after this picture was taken.

veterinarian, is one of many researchers doing intensive studies in an effort to find some substance that will clean the birds without mortally damaging them. After Santa Barbara he came up with the idea of using mineral oil, and while it is better than anything else previously tried, Naviaux readily admits that it may not be the answer. "Our biggest research problem," he says, "is keeping the birds alive long enough to work out our theories."

As I drove away from the beach, I casually turned on the car radio and heard the news of yet another spill. This one, 3,000 miles away, was practically in my own front yard on Long Island Sound.

I immediately headed for the airport. As I drove I could hear what my bird-loving wife had said as she kissed me goodbye two days earlier: "Be sure to learn the correct procedure for cleaning birds," she had said. "You now it's bound to happen here one day."

GEORGE SILK



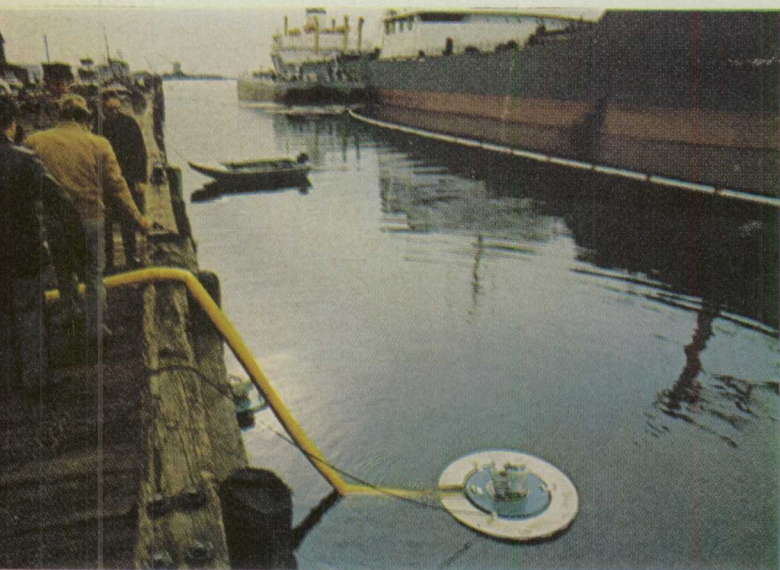
In New Haven, light



A plastic skirt suspended beneath floats contains part of the New Haven spill.

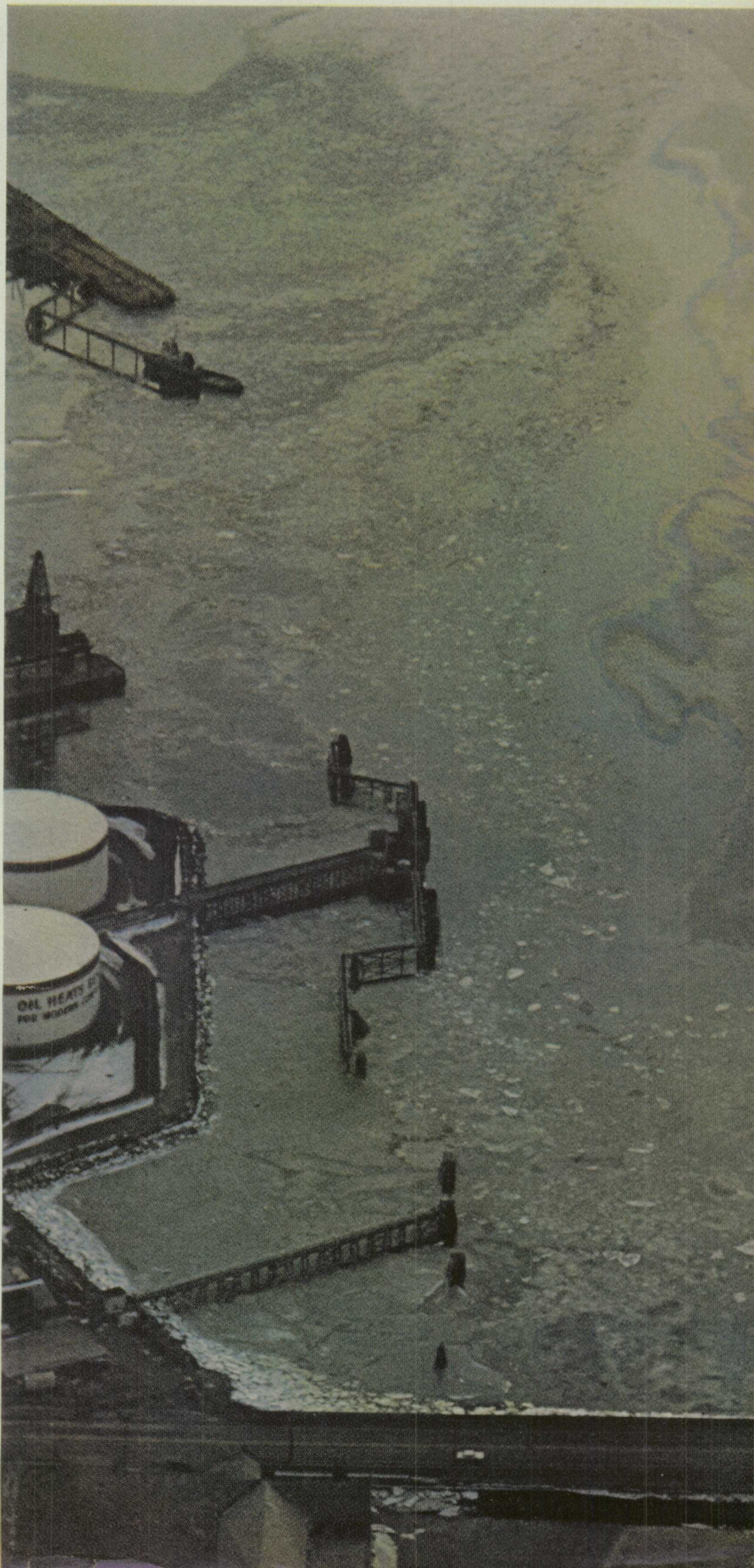
Humble Oil officials described the New Haven spill as a "light, clean oil" that would dissipate quickly through evaporation. The mayor of New Haven added, "Thank God for the ice"—which was jammed up along the shore and kept some of the oil from reaching the beaches. Up and down the line, officials applauded the good news. But one of the country's major experts in the field of oil spills wasn't so sure. Dr. Max Blumer of the Woods Hole Oceanographic Institution has for the past 16 months been studying a similar spill in Buzzards Bay off Cape Cod. Says Blumer: "A year and a half later we have essentially a dead sea as far as the bottom is concerned. It is nonsense for anybody to call a light oil 'clean.'" Blumer is particularly concerned with toxic hydrocarbons: poisonous fractions of oil that mix easily with water and fan out into the ocean as soon as a spill occurs. They can't be held by booms or blotted up with straw.

The two spills have already prompted Coast Guard hearings as well as demands for legislation to control tanker movements in harbors or near the shore. One-way shipping lanes have been proposed to prevent collisions, and it has even been suggested that all tankers be required to have double hulls. Like most ecological safeguards, all such proposals would be expensive and possibly impractical. But then, so are oil spills.



Oil that continued to leak from the docked *Gettysburg* is sucked up by a series of skimmers.

New Haven harbor displays from left to right bands of ice, oil and sewage effluent.



oil raised questionable hopes



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