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ESSENTIAL

The shape of the West

Edited by Paul Frichtl

THE NEW FORESTRY

Pick up a newspaper or magazine these days and chances are you'll find a story on northern spotted owls and the Northwest's timber crisis. Chances are you'll also run across the name Jerry Franklin. Known in timber circles as the "dean of old growth," the 55-year-old U.S. Forest Service ecologist has played a key role in one of the Northwest's most pressing questions: Should ancient forest be cut, thereby saving jobs, or preserved as habitat for the spotted owl and other wildlife?

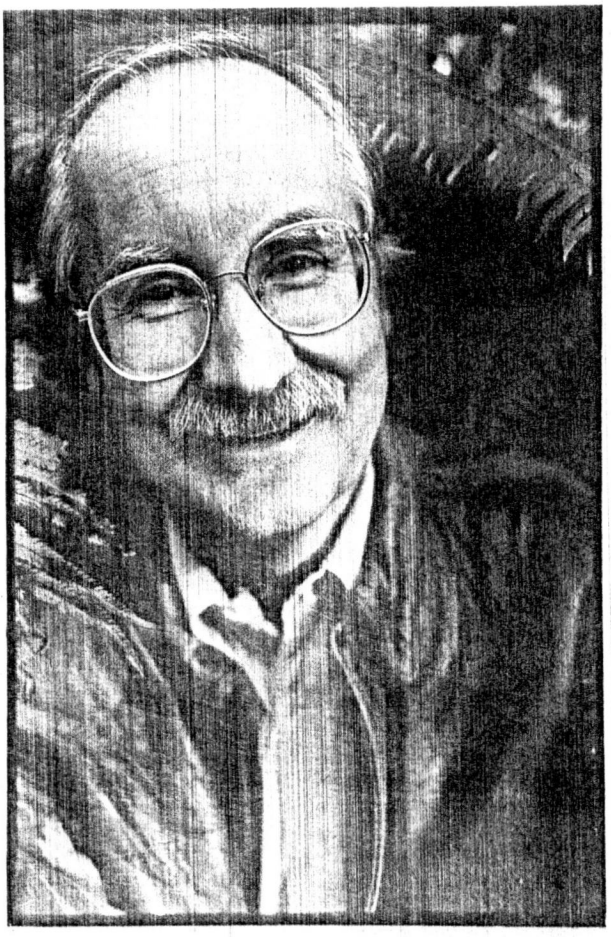
Franklin thinks he has the answer: Do both. His program, appropriately titled New Forestry, seeks to balance demand for wood with ecological values. Simply put, New Forestry softens the environmental impacts of logging by leaving part of the forest behind. It is, in Franklin's words, "a kinder and gentler form of forestry."

Key to New Forestry is the notion of structural diversity. The natural forest contains trees of all kinds, from seedlings to dead snags. Each provides crucial habitat for different animals. But the 50-year-old practice of clearcutting and replanting replaces such diversity with uniformity and, according to Franklin, harms wildlife. "In the natural forest," he says, "uniformity isn't necessarily a good thing."

Instead, Franklin wants loggers to leave behind as much as 30 percent of the forest—live trees, snags, and fallen logs—to provide wildlife habitat until a new forest can grow. Preliminary research suggests that some species appreciate this new approach to woods management.

New Forestry has been embraced by the Forest Service and several lawmakers, but it has critics. Some observers wonder whether New Forestry can be practiced profitably. And some environmental groups see Franklin's idea as an excuse to cut old-growth, calling it "a kinder and gentler form of rape."

Jerry Franklin



LISA STONE

Such attacks are hard on Franklin, who, as a native of Camas, Washington, developed an early respect for nature. "From a young age," he recalls, "I was always aware of, and awed by, these huge old trees." In 1966, after receiving his doctorate in botany at Washington State University, Franklin went to work for the U.S. Forest Service. He studied old growth, quickly gaining a reputation as both a scientist and a research leader. At one point, he was loaned to the Japanese government to settle a timber dispute.

Now, splitting his time between Forest Service work and re-

search at the University of Washington's College of Forest Resources, Franklin pushes New Forestry with the zeal of a reformer. This, too, upsets his critics, who say he loses credibility by merging science and advocacy. Others aren't so sure. "Where do ideas come from?" asks Jack Ward Thomas, the highly regarded Forest Service wildlife biologist, whose 1989 study put the spotted owl on the Endangered Species list. "If a senior scientist ultimately doesn't step forward and say, 'Here's what I think,' would there be any discussion? People wouldn't be talking about New Forestry if it weren't for Franklin and his colleagues." *—Paul Roberts*

DRINKING THE OCEAN

Residents of Santa Catalina Island, California, expect to drink a toast—cool, pure water—next month to the opening of the state's first operating desalination plant. A year later, officials in Santa Barbara are expected to open another desalination facility, one that will help alleviate the area's acute water shortage. If the trend continues, San Diego will follow suit as the third California community to use desalination technology in the drought-stricken state.

The first plant, on Santa Catalina Island, 22 miles off the Los Angeles coast, is being built through an unusual business agreement between Southern California Edison, a public utility, and Hamilton Cove Associates, a private developer. Keith Lefever, Edison engineer, says the plant "will be one of the first in the United States to convert sea water into public drinking water."

The plant uses reverse osmosis technology (water passing through fine membranes) to separate salts from water, rather than distillation technology (recovering steam as pure water), Lefever explains. The process will provide water at a cost of about $1,800 per acre-foot, compared to $1,000 per foot for water on the mainland. Yet the cost is comparable to the cost of maintaining reservoir water on the island.

Jointly designed by David A. Boyle Engineers of Santa Ana and Edison, the plant will be constructed by Pasadena-based Hamilton Cove Associates. Edison, after two years, will own and operate the $2.5 million venture, which will boost the island's annual water supply an additional 145 acre-feet; one acre-foot is 325,850 gallons. In exchange for constructing the plant, Hamilton Cove will have rights to half the water.

Construction of the plant in conjunction with Hamilton Cove's condominium resort is an important development, since Santa Catalina Island was established as an environmental preserve and has one of the state's slowest growth policies. People who live on the island cannot own land, but retain long-term leases from the Island Conservancy, an organization established to maintain the natural beauty and habitat, which includes buffalo and wild boar. There is a five-year waiting list to get a car on the island, and residents and guests run around in non-polluting golf carts.

The Catalina plant is clearly a forerunner of desalination projects in water-thirsty coastal communities. After four years of drought, the hard-hit city of Santa Barbara has approved plans to build a reverse osmosis plant by the end of 1991. "We were considering importing water by barge from Canada when the city council chose desalination as the more cost-effective alternative," says Diana White, city spokesperson. Massachusetts-based Ionics, Inc., was chosen by the council to build the project after it submitted a bid to provide 5,000 acre-feet of water per year at a cost of nearly $2,000 per acre-foot.

Further down the line, and still on the drawing board, is a joint proposal between the San Diego County Water Authority and San Diego Gas and Electric to link a coastal desalination plant to a new 460-megawatt power plant. By the end of the year, the water authority will have determined the feasibility of purifying ocean water through distillation, using the power plant's excess energy to drive the process. Byron Buck, director for the water authority, estimates that the cost could be as low as $700 to $900 per acre-foot, if the two plants were built together. *—Jeanne Trombly*

MITS KATAYAMA

JUGGLING FISH

Great fortunes are again being fished from the Bering Sea, where a succession of Aleuts, Russian fur traders and pioneer Alaskans hunted its waters for salmon, sea lion, seal and whale. In 1990, fortunes run with the booming groundfish trade. But as with so many of Alaska's resource-dependent industries, overwhelming success today could spell bust tomorrow.

Factory trawlers crowding into the Bering Sea and Gulf of Alaska over the last five years are at the center of a rising controversy. The highly efficient floating fish factories harvest and process pollock, cod and other bottom-dwelling fish mostly for the Japanese market. From 1988 to 1990, revenues in this fishery tripled, from $232 million to $700 million per year. But the ballooning groundfish industry has already swelled beyond capacity. "The problem right now is there aren't enough fish to go around," says fisheries biologist Don Bevin, professor emeritus and former dean of the University of Washington's College of Fisheries.

The factory-trawler fleet, worth more than $1 billion, is capable of catching virtually every bottomfish that government harvest provisions currently allow. Moreover, factory trawlers process some 80 percent of that quota, according to the Alaska Factory Trawler Association (AFTA). As a result, turf wars have erupted—and are intensifying—between factory-trawler fleet owners and the fishermen and processors that support the traditional shore-based processing industry.

By all accounts, the offshore factory fleet has the upper hand. The fleet can work away from port for months at a time, harvesting and preparing the catch on board. Shoreside Alaskan towns, from Kodiak to St. Paul, fear their fish supply will be cut off by the largely out-of-state factory-trawler fleet.

"We are going to look at the last four months of the year without work at all, because the amount of pollock we normally would have fished in the fall was taken in less than three weeks by nine factory trawlers," said Chris Blackburn, director of the Kodiak-based Alaska Groundfish Data Bank, speaking to a congressional subcommittee in August 1989. "It is like living with the sharks."

To alleviate the problem, the North Pacific Fishery Management Council is