

FINIS MITCHELL, LORD OF THE WINDS

Article by JAMES R. UDALL

On August 22, 1960 a backpacker was caught in a blizzard far above timberline in the Wind River Range of Wyoming. The storm came up suddenly and as suddenly turned vicious. Within minutes, the wind was a buffeting gale, the snow was horizontal. The man was fifty-nine years old. He was alone. He had no tent. He had no stove. His prospects seemed as poor as his preparations. Appearances, however, were deceiving. In reality, Finis Mitchell could not have been better prepared, for he had long ago learned the ways of the wild.

“The wind was terrific, “ he recalls. “I saw three bighorn rams leaning against it as they headed down. And knowing that wildlife are much smarter than man in their environment, I followed as best I could. They led me into some crags where—to my amazement—there were another sixty sheep already holed up.”

As the drifting snow broke over him like spindrift on a beach, Finis unfolded a ground sheet in the lee of a rock and crawled into his sleeping bag. It felt *great* to get out of that wind. After nibbling a piece of his wife Emma’s fruitcake, he grew warm, then sleepy. When he awoke, it was dark. A dune of snow covered him. Poking his head out, he listened to the wind shrieking through the cliffs above. He felt curiously euphoric: How exhilarating it was to be nestled by such fury. Sometime later, a drowsy epigram crossed his mind: The beauty of nature is its power; its power is its beauty.

Finis spent three days there, patiently out waiting the storm. Snug beneath his blanket of snow, he was unaware

that another hiker was dying of hypothermia four miles away. The sheep kept him company. “They fed all around me. We shared a waterhole. I learned more about bighorns than I had in all my life before.”

It is a life that meanders across this century like a road in a Georgia O’Keeffe painting, until it vanishes into bygone times. When Finis was five, his dad traded, sight unseen, forty acres of Missouri farmland for 160 acres at the foot of the Wind River Range. “We came west in a boxcar. Had everything we owned in there. Wagon, two mules, cow, dog, household goods. Got to Rock Springs, Wyoming, on April 26, 1906.

“Hitched up; headed north. That sagebrush desert was so lonesome, one of our mules got homesick and died. Took us a week to get there. Melted snow for water; ate sage hens. Dad’s land was worthless—nothing but sand. Starve to death, that’s all.

“Couldn’t make a living farming, so we hauled freight—‘a penny a pound, a dollar a hundred.’ In 1909 I was helping Dad to hunt elk in the foothills. Looking at a little mountain, he said, ‘I wonder what we’d see from up there?’”

From the top, the boy peered into the heart of the Wind River Range. He was captivated. “I still haven’t forgotten my first look. It must be the beauty of the land.”

Straddling the Continental Divide for 120 miles, the Wind Rivers are flung like a net across the sky. The net is 13,000 feet high, and it knocks down staggering amounts of snow. Only 9,000 years ago, these mountains were draped with an immense ice cap; glaciers surged forth onto the surrounding plains. Today much of the ice is gone, but the ten largest glaciers in the Lower Forty-eight remain.

Ice, gravity, granite, time. The result is an enchanting landscape of cirques and spires, turrets and tarns, and more than 2,000 lakes. The range is starkly, achingly beautiful. But unlike the Sierra Nevada, to which it bears some resemblance, this is no gentle wilderness. The fickle weather bedevils the hiker; the tortured terrain intimidates him. But it is the wind, forever plucking at your clothing and keening in your ear, which hones the range's brooding aura.

Rattling through the aspens, whirling golden leaves into the sky, the autumn breezes don't so much hint, as reek, of snow. Lyrics come to mind:

*Way out here they have a name
For rain and wind and fire.
The rain is Tess, the fire is Joe
And they call the wind Mariah
Mariah blows the stars around
And sets the clouds a-flying
Mariah makes the mountains sound
Like folks was up there dying.*

Yet the Winds' foreboding ambience is leavened by their grandeur. The combination is immensely seductive. Go once, you will crave to return. For, though you may leave, the rapture remains, a fever in your blood.

Each winter the range is recaptured by the Ice Age. Two million frosty acres, nearly deserted. Gray jays, ptarmigan, pine martens, snowshoe hares, and ermine, few and far between. As for man, only a few winter mountaineers, as rare as wolverines. I once skied the length of the range—a three-week trip—without cutting another track.

Summer is a mirage. It can, and does, snow anytime. This does not deter mosquitoes or the pilgrims on which they prey. Fishermen, their hats bedecked with phony *Ephemera*, are reeled into the Wind Rivers by millions of

gullible trout. Climbers, whose shouts—“On bela-a-ay!” “Climbing!” “Climb!”—can sometimes be heard in the distance, stagger in under huge packs, stuffed with chocks and carabiners and Perlon ropes, to climb Sharks Nose or Wolfs Head or War Bonnet. A hike through the Winds is a rite of Passage for Boy Scouts, who ditch their counselors, burn their food, and blister their toes in pursuit of a hootin’ good time. Most numerous are the backpackers, who come to wander—paying their respects—through one of the most magnificent wilderness areas in America. Although he has a house in Rock Springs, this is Finis Mitchell’s *home*.

“Mountain man” is easily the most hackneyed term in western history. But Finis Mitchell qualifies. In the seventy-seven years since he first gazed in reverie, he has “fished, hunted’ trapped’ or used any excuse I could to rig up to go back to those mountains.” According to his own reckoning, he has hiked 15,000 miles, climbed 276 peaks (some of them twenty times), and worn out a dozen cameras taking 110,000 color slides. Mere numbers, however, can’t corral the man.

Wilderness looms tall in our national consciousness, but few of us dedicate ourselves to exploring our local turf, whether that be the woodlot out back or the mountain on the horizon. When it comes to geography, we are a nation of dilettantes—gypsy rovers. Finis is not. He knows only one place, but knows it well. So well that the U.S. Geological Survey sends him preliminary drafts of its maps, to correct from memory.

One way to appreciate the breadth of Finis’ wanderings is to climb Mitchell Peak, 12,482 feet, overlooking the Cirque of the Towers. (To honor Finis, the USGS broke its rule precluding the naming of topographical features after the

living. "I told them I was half-dead anyway," he says.) On the summit is a plaque. It reads:

My Ascents

7-4-23 7-11-28 7-3-30 8-1-34 7-2-46 7-9-53
7-20-60 8-12-67 8-18-71 7-26-73

When the plaque went up, Finis was seventy-one. Since then he has climbed Mitchell Peak seven more times to savor the range he loves, spread out below.

In the early years, he generally went alone. If you marry solitude to grandeur, you must expect revelations. Seeking views, Finis stumbled on visions. "Throughout this century I've reamed the wilderness, communing with nature, observing other creatures along with myself, merely desiring to live and let live," he writes. "Because of the aloneness, I've learned to love not only those of my own kind, but all life... the birds, the beasts, the trees, the flowers, and the grasses of the land."

FINIS (rhymes with highness) has always treated the aging process like a pesky mosquito, best ignored. Lately, however, the bug has been vexing him. In 1982 he suffered a stroke but "kicked it out and went hiking." During a visit in February 1985, I find him eagerly awaiting summer and the melting out of the Winds.

For forty-four years, Finis supported his family by working for the Union Pacific Railroad. Today, dressed in red lumberjack shirt and blue bib overalls, he looks as if he just finished a shift. At eighty-three, his mind is alert, his cheeks are ruddy, his eyes are clear. He says that in his prime, he was a robust man, six feet tall and 188 pounds, "but I've shrunk." He says that his short-term memory is slipping some, but he remembers events from decades past as if they

happened yesterday. I admire the bighorn sheep on the mantle. Are they his favorite animal? “Oh, yes,” he says fondly, as if speaking of friends absent but not forgotten. “I respect them in every way. They are just magnificent animals.

“One time I spied these seven big ones, old devils, too old to do anything else, lying down on a bald mountain. I couldn’t just walk towards them because as soon as they see you on your hind legs—they think it’s your hind legs—they think you’re wanting to fight. They don’t want to fight. They only fight during the rutting season. They want to be peaceable.

“What I’ve learned is to crawl towards them. Not right towards them or you won’t get one hundred feet. Go around. Act like, ‘Hell, I don’t care nothing about you.’ Just circle in, crowding them a little bit. First thing you know you’re within a couple hundred feet. Take all the pictures you want.”

Finis is a born storyteller, and he regales me for hours with similar tales. It is late afternoon before we get around to scheduling a hike together. Then, as I prepare to leave, Finis shows me a list of Wind River lakes the U.S. Environmental Protection Agency intends to sample as part of a survey to determine which parts of the West are vulnerable to acid rain. The survey will coincide with the bighorn hunting season, and Finis is worried that EPA’s helicopters will herd bighorns toward the hunters. “They better not go to these lakes,” he exclaims, jabbing his thumb at the list. “I’ll shoot down a dozen helly-copters, if they bother the sheep.” I dismissed this as an idle boast until I later read that twice in years past Finis, learning that a band of elk were to be poached, stormed into the mountains to spook the animals away from their normal haunts before the hunters arrived.

Finis says “acid rain” as if it’s foreign to his tongue and adds, “I don’t know much about it.” He’d much rather blister the Forest Service (“I’m older than it is”) for permitting domestic sheep to “befoul the wilderness” than discuss an invisible plague. He does, however, get riled up about air pollution. During the past two decades a pall of smoke, like a gathering storm, has swept into Wyoming. “Our air used to be crystal clear, but now it’s getting more putrid every year,” he says in disgust. “If we pollute the air we affect everything else: the rain, the soil, the vegetation, the animals.” Intuitively, Finis seems to recognize that air pollution and acid rain are related and that both are, like hot tubs and rush-hour traffic, byproducts of the American Dream—at least to the considerable extent that dream is founded in fossil fuels.

Each year, U.S. factories, power plants, cars, and smelters spew forth 50 million tons of sulfur dioxide (SO_2) and nitrogen oxides (NO_x), the pollutants most responsible for acid rain. (In the atmosphere SO_2 and NO_x are converted to acids and then return to Earth as dry particles, gases, fog, rain, or snow.) Since 70 percent of that tonnage is emitted east of the Mississippi, the prevailing assumption has been that the acid rain battle, like the Civil War, would spare the West. Not so. While precipitation acidity in the East has leveled off over the past decade, it is increasing in the West. Although no western lake has been permanently acidified, most scientists believe it is a question of when rather than whether. “Alpine lakes throughout the West are approaching a cliff,” says John Harte, a physicist at the University of California at Berkeley who is studying acid rain in both the Sierra Nevada and the Rockies. “Is the cliff five years away? Or twenty? We don’t know. What we do know is that we are dealing with extremely sensitive aquatic ecosystems.”

A lake's ability to neutralize acid rain is measured in units of alkalinity per liter (ueq/l). Lakes with less than 200 ueq/l are said to be "sensitive." During 1983 Alan Galbraith, a U.S. Forest Service hydrologist, sampled ninety-two Wind River lakes. The *highest* value he found was 160 ueq/l. The lowest was ten. "The lakes in the Wind Rivers may be the most sensitive of any in the Lower Forty-eight," says Galbraith. "And there is the distinct possibility that within ten years we may witness a number dying due to acid rain." In those words dwells a staggering irony.

Until 1930 only a handful of the 2,000 lakes in the Wind Rivers held trout; the remainder, isolated by waterfalls which fish could not surmount, were barren. But then the Great Depression cost Finis Mitchell his job.

"When we got laid off, that was it. There was no unemployment compensation. There was no jobs, period, even for beggars. I went up into the foothills to trap. Emma and I ate a lot of beaver that spring to keep our belly buttons from rubbing agin our backbones.

"A friend suggested we open a fishing camp. Hell, we didn't have nothing else to do. To start with, it was tough because there were only fish in about five lakes. That summer, though, a man from the hatchery drove out and asked us whether we'd be willing to pack trout into the mountains, free. We was tickled to death. Fishing was our life, see.

"The fish came in twelve five-gallon milk cans. They were an inch long, a thousand to a can. We'd cover the tops with burlap and strap them, one to a side, on six packhorses. You had to keep the horses moving all the time, even when you were loading up, so the trout wouldn't smother."

Picture him: arriving at an un-named lake, a strapping young man—battered Stetson, worn jeans, and sweat-dappled

shirt—tethers his horse, unties two milk cans, and lugs them to shore. He dumps the cans in, then watches the swarm of fingerlings disperse into the limpid waters of their new home. After scooping a drink as a bear does a salmon, he grabs the empty cans, hurries back to the pack string and on toward the next lake.

Between 1930 and 1938, Finis, his brother, and his father stocked 314 Wind River lakes with 2.5 million rainbow, cutthroat, golden, brook, and brown trout. From those lakes the fish were able to reach 700 more. “The lakes were virgin and full of lice, leeches, and shrimp. The fish just gorged. Some of the brook trout weighted three pounds the third year. They were so fat that they looked like footballs.”

Although the State of Wyoming periodically restocks some of those lakes, in others every fish caught is descended from those planed by Finis Mitchell fifty years ago. That these fish, which owe their existence to the god deeds of one man, are now threatened by acid rain, a pandemic pollutant for which all of us are responsible, is an excruciating allegory, a reflection of our times.

To put the West’s acid rain problem into perspective, one must consider recent developments in the eastern United States and Canada and in Scandinavia and elsewhere in Europe.

When acid rain first gained widespread attention in the late 1970’s, the fear was that it would transmute living lakes into dead ones. This it has done: in Sweden, 18,000 lakes gave been sterilized; in Canada, 10,000 lakes have succumbed and 40,000 more are threatened; and in the eastern United States, where the average rain is now as acidic as tomato juice, the Office of Technology Assessment estimates that

3,000 lakes and 23,000 miles of streams have been, or are on the verge of being, acidified.

But dead trout aren't the half of it—acid rain is now killing millions of acres of trees on both continents. The trend is most advanced in West Germany. Robert Bruck, a forest pathologist at North Carolina State University, says, "In 1979 symptoms of decline were first noted in high-altitude forests in West Germany. By 1982 eight percent of the trees were affected. By 1983 thirty-four percent had symptoms. And by 1984 fifty-five percent of German forests were in a state of decline."

The symptoms are increasingly bizarre. Green leaves are dropping, for no apparent reason, in the middle of the summer. Beech trees, whose leaves are typically serrate, are growing round leaves. Due to what may be permanent changes in soil chemistry, few seedlings are taking root. Although only one percent of German forests have actually died, nine million acres are damaged, and many German scientists now believe that their forests, as they know them, will not survive.

Three things are ominous about these reports: Whatever is happening is happening very quickly; it may prove irreversible; and subalpine and alpine forests in the eastern United States are exhibiting identical symptoms. Are we going down the same road as the Germans? "That's the \$64,000 question," says Bruck. "I have no hard evidence to say that we are. But, boy, I sure won't tell you that we're not. It will be a sad state of affairs if we undergo the kind of epidemiology they are witnessing. That is unprecedented! Never in the recorded history of man have forests declined and died as rapidly as they are doing right now in central Europe."

In Bruck's view, the eastern United States and Europe are facing "the ecological catastrophe of the century." Clearly, the West faces a different kind of test. Bob Yuhnke, a lawyer with the Environmental Defense Fund, who has done more than any other single person to document the growing menace of acid rain in the West, says of eastern forests, "Those places never knew what hit them. By the time anyone knew something was wrong it was too late. Westerners can benefit from that experience. We know acid rain is falling. We know our lakes are sensitive. Therefore, we cannot *accidentally* acidify lakes as we did in the Northeast. If we kill our lakes, it's going to be *intentional*."

This need not happen. Although the damage threshold has been crossed in parts of the West, the affected lakes are salvageable. "The entire situation is on the cusp," says Yuhnke. "If we make the right decisions during the next five years, we can avert any damage. If we don't-well, then, we're going to watch our lakes die. Count them up: lake by lake and year by year."

Human foresight versus human folly. If the outcome is in doubt, the stakes are mind-boggling. According to a recent report by the National Clean Air Fund, acid rain threatens 10,000 western lakes scattered throughout fifty-five national forests, twenty-three wilderness areas, and ten national parks. A list of just the parks includes many of the "crown jewels": Glacier, Yellowstone, Grand Teton, Rocky Mountain, Yosemite, Kings Canyon, Sequoia, North Cascades, Olympic, and Mount Rainier. (The significant common denominators are geology and elevation). The most fragile lakes and forests are found in granitic mountain ranges near timberline.)

Of course, national parks and wilderness areas have always been under some kind of attack. But until now those

assaults have always been discrete, threatening first this area, then that one. Acid rain, however, threatens the entire western ensemble that generations of conservationists have struggled to compose. The scope of the danger is so unprecedented that it is difficult to credit and nearly impossible to fathom. Neither of which makes it any less real.

AFTERSTOCKING A LAKE, Finis would wait a few years before returning, fishing rod in hand, to see how his fish had fared. His experience at Rapid Lake was typical: "The first fish I caught was a four-pound male. Bucks we called them. He was a monster. He looked like you had blown him up with a pump. My dad said I better turn him loose because it was possible only one buck had survived So I turned him loose and went around a couple of hundred feet and caught another buck, and he weighed five and one-half pounds."

It is doubtful whether anyone has ever enjoyed better fishing than Finis did during the 1930s and 1940s. Of those years, he has written, "Trout multiplied into the millions, only to reach weights of four to twelve pounds and then die without seeing a single hook." Today many Wind River lakes are so lightly fished they are overpopulated; consequently, the average trout is smaller than in Finis' heyday. Nevertheless, the range is still widely regarded as one of the world's best high-altitude fisheries. At least for the time being.

In 1938 Finis was rehired by the railroad. The Mitchells closed their fishing camp and moved, with their two young children, back to Rock Springs. They had received nary a penny for transforming the Wind Rivers into a sportsman's paradise and were \$4,000 in debt. It was years before they could afford a car. During this period it was difficult for Finis to get to the mountains. But when he could, he did. His

craving was considered queer. "No one wanted to come with me," he recalls. "They said they hadn't lost anything up there and warned that someday I would fail to come back. But I've put daisies on most of those people."

Finis' favorite part of the Winds has always been the jagged, austere, luminous land above the trees-the alpine tundra. "Suits me from A to Z," he says. "You can really appreciate your own insignificance up there." Arriving late in the day at a secluded lake, he would drop his pack, shoot pictures until the alpenglow faded, and then jot his notes: *Evening alone in the mountains. No one to talk to. No one speaking out . . . Only the comfort of a murmuring breeze, the goodnight chirp of the snowbird ... the glistening of the moon on a distant glacier, the faint music of waterfalls scurrying down. Where else can a man be so close to heaven and still have his feet on the ground?*

BECAUSE OF a fateful arrangement of geological, hydrological, and meteorological 'factors, the lakes most threatened by acid rain are found up high, near the crests of the Sierras, Rockies, and Cascades. How ironic that these remote lakes-many are completely inaccessible eight months of the year-should turn out to be the lakes most vulnerable to our industrial society's pollution. This paradox, it seems to me, presents conservationists with a Zen koan. But what is the meaning, the lesson, the teaching? Why is it that the most vulnerable lakes are those we cherish as most pristine?

In terms of acid precipitation, think of an alpine lake as a delicate vase--easily shattered. Consider a typical one: A

tiny body of water, it is imprisoned by winter's ice, only to open like a flower under the summer sun. By July lingering snowdrifts intermingle with granitic outcrops around its margins. Marmots--fat, furry whistlepigs--scurry about, making the most of the growing season. Ptarmigan nibble at willows dwarfed by evanescent summers and rocky soils. Here and there a few masochistic outposts of krummholz have been whipped nearly flat by the wind. Standing on shore, a hiker wonders how a landscape with so little order can possess such harmony.

Unfortunately, everything about this lake which pleases the eye leaves it vulnerable to acid rain. Because it is surrounded by sheer cliffs and shallow soils, little of the acid which falls in this cirque will be neutralized before it reaches the lake. The granitic bedrock weathers slowly and can contribute essentially no new alkalinity to replace any that is lost. The lakewater, distilled from the sky, is as pure as pure can be. But the purest things are the most easily defiled, even from afar. Our lake's fragile chemistry is no match for its stormy weather.

There is a meteorological double whammy involved, and it works like this: First, mountains always receive more precipitation (and thus more acid) than nearby lowlands. Second, heavy alkaline dust particles, which could neutralize that acidity, drop out at lower elevations as storms climb over a mountain range. Thus, alpine lakes not only receive the *most* precipitation, but the most *acidic* precipitation as well. The bulk of it is snow. Many alpine lakes get more than 600 inches--fifty feet!--per year. Throughout the winter, the snowpack acts as a sponge, sopping up acid. At snowmelt, the sponge is squeezed. A "spring pulse" pours into the lake precisely when aquatic insects are hatching and fish are spawning in shallow water.

It takes years for acid precipitation to kill a lake. The process has three stages. In the first stage, the lake gradually loses its alkalinity. In the second stage, as its alkalinity approaches zero, the lake acidifies during a spring pulse; this is called "acid shock." The first few times this happens, the lake will regain some buffering capacity later in the summer. "But lakes are like paper clips," says John Harte. "You can only bend them so often before they will break." Once its alkalinity is exhausted, the lake enters stage three. Defenseless against the acidic onslaught, its pH plummets, its life disappears.

This process begins in sensitive lakes when the average precipitation pH drops below 4.7. In 1983 a measuring station at the foot of the Wind Rivers had a pH of 4.6, ten times more acidic than unpolluted rainfall. But most of the lakes that Finis stocked are 3,000 feet higher and receive three times as much acid. "Those alpine lakes are receiving acid at a rate which they can't tolerate for very long," says Glen Dunning, a biologist with the Wyoming Game and Fish Department. "Once those lakes have turned it will take hundreds of years to bring them back, even if air pollution is cleaned up."

IN 1945 FINIS and his seven-year-old son went fishing. "From the trailhead we hiked over the Continental Divide to Washakie Lake. My boy caught five fine goldens, one a six pounder, and I caught a thirty-one incher that weighed eleven pounds four ounces." To this day no one has ever caught a larger golden trout. "But we'd never heard of keeping records, so I gave it to the governor."

Golden trout are native only to the Kern River, which drains the southern Sierra Nevada in California. There they rarely grow larger than a pound. They are flamboyant fish, the Dolly Partons of the trout family. A band of rouge runs

from gills to tail. Their flanks are iridescent yellow, trending toward orange. Sculling in shallow water, they cast a bedazzling glitter which can transfix an angler on shore.

Goldens are finicky. They thrive only in the purest water, preferably at high elevations. The first place they were successfully transplanted was the Wind Rivers, where they now thrive in eighty-five lakes. Other tiny populations are sprinkled around the West. "Since goldens are so rare, not much is known about them," says Frank Sanders, a limnologist at the University of Wyoming. "In particular, there is virtually no data on the sensitivity of the species to acid deposition. We have surmised, however, that since they are adapted to such pristine waters they may be the most sensitive trout."

To anyone who has ever gone in search of them, golden trout, like grizzly bears, serve as both indicators and symbols of wilderness. To the extent they are imperiled, so, too, is our belief that we can have unchecked industrial growth over here and virgin wilderness over there.

The Wilderness Act defines wilderness as a place where "the Earth and its community of life are untrammelled." Roads, buildings, motorized equipment, are prohibited to ensure that "the imprint of man's work" shall remain "substantially unnoticeable." People go to great lengths to honor those tenets. Trail crews employ double-bitted axes instead of chainsaws, live in tents rather than cabins, ride horses instead of all-terrain vehicles. But is acid rain less of an "imprint" than a motorbike or a chainsaw? No, just the contrary. A chainsaw's noise is a fleeting nuisance; acid rain is an abiding *poison*. The obvious question is: How many of the West's wilderness areas remain worthy of the name? It is true, as Aldo Leopold wrote, that "wilderness is a resource which can shrink but not grow," and ours is clearly

dwindling.

ACID RAIN? OUT WEST? Where the deer and the antelope play? Where seldom is heard a discouraging word, and the skies are not cloudy all day? The idea takes some getting used to. After all, there are about as many antelope as people-about 500,000 of each-in Wyoming, a state twice the size of New York. Where is the pollution coming from?

Nobody really knows. The best guess is that roughly half of the acid precipitation falling in Wyoming is homebrewed; the rest wafts in from powerplants, factories, smelters, and cars in Utah, Arizona, California, Washington, Oregon, and even Mexico.

During the past thirty years the West's population and its emissions of NO_x and SO₂-have nearly doubled. The deterioration in air quality has been steady-and depressing. "Years ago you could see the Uinta Mountains from the Wind Rivers," says Finis. "That's about 160 miles. Now you can't even see half that far." But it is not simply a case of more people equaling more pollution. The West has become industrialized, and no place more so than Wyoming.

The major impetus has been the energy crisis. Back in the 1970s, when it seemed that the engine of progress was about to seize for lack of vital fluids, Wyoming's abundant oil, natural gas, uranium, oil shale, and coal reserves were tapped. A 2,000-megawatt power plant, named after Jim Bridger, one of the mountain men whose trails skirted the Wind Rivers, was built fifty-five miles south of the range.

Farther west, Exxon is spending \$2.5 billion to develop a vast field of "sour" gas (so-called because it contains hydrogen sulfide, an odoriferous poison). When the field was discovered in the 1960s it was uneconomic: The gas was three miles deep and only one-third methane. The rest was carbon dioxide, which puts the fizz in soda pop, but for

which no other market existed.

By 1981, however, oil companies were clamoring for carbon dioxide (to pump back into the ground to force more petroleum from exhausted oilfields), and Exxon applied for a permit to build the world's largest gas processing plant at Shute Creek, Wyoming. The methane was now just a byproduct-the carbon dioxide had become the cash cow. As for the hydrogen sulfide, although Exxon planned to capture 99.7 percent of it, they proposed to release the rest-two million pounds per year-seventy miles upwind of the Wind Rivers.

Nobody knows what impact this would have. But as the Clean Air Act is written, Exxon did not have to show that its emissions *wouldn't* harm the Winds; the Forest Service had to show they *would*. The burden of proof was ass-backwards.

The Clean Air Act has other flagrant shortcomings. "An 'air quality' permit does not guarantee that air quality will not be degraded," says Debra Beck, director of the Wyoming Outdoor Council. "It doesn't even assure that emissions will be limited to the 'permitted' amount." Beck has a point: In 1983 SO₂ emissions in southwestern Wyoming were twice what was nominally allowed. The worst offender was a Chevron plant, which emitted 27,700 tons of SO₂-27,542 more tons than its permit allowed. At times, Chevron employees simply flared all of the SO₂ the plant was supposed to recover. "It was outrageous," says Beck.

"Our people were on a long learning curve," a spokesman for Chevron replies.

Since jobs are scarce in Wyoming, there was never any doubt that Exxon would get its permit. When it did, conservationists appealed. A hearing was held. John Washakie, a member of the Shoshone Indian tribe whose reservation abuts the Wind Rivers, testified, "The corporate

conscience deals only with dollars and cents ... Our religion teaches us that we are one with the Earth and whatever affects the animal world will soon be felt by us." The appeal was denied. Shortly thereafter, Exxon announced that it might double the size of the plant.

AS UNLIKELY as it sounds, the fate of Finis' fish may be more closely intertwined with events in Arizona and Mexico than with Exxon and Chevron. Three-fourths of the SO₂ emitted in the intermountain West comes from thirteen copper smelters. All of those smelters, save one, are complying with the Clean Air Act. The exception is a smelter in Douglas, Arizona, owned by the Phelps Dodge Corporation, whose sanctimoniousness knows no bounds.

The Douglas smelter was constructed in 1913. Today Douglas is the only smelter in the country with *no* pollution controls—is the West's largest source of SO₂ and the fourth largest in the United States. Although it routinely violates federal air standards, and children living nearby have four times the recommended maximum amount of arsenic in their hair, Phelps Dodge refuses to clean it up.

"On an average day in southeast Arizona," complains Governor Bruce Babbitt, "it looks as if you are in Pittsburgh in 1920." But Babbitt, too, is blowing smoke: He could close the smelter but has refused to do so.

"Babbitt's been waffling," EDF's Yuhnke says. "He's shown a lot of footwork but no movement. He doesn't want to take the heat!"

Recently, Douglas' future has been married to that of a mammoth new smelter built at Nacozari, Mexico. Nacozari, too, has no pollution controls. Scheduled to start up this spring, it will become, at 1,300 tons per day, the second largest source of SO₂ in North America. The prospect is

appalling. "Because the prevailing winds will sweep this plume as far north as the Wind Rivers, Nacozari will be the most important thing to happen to the West in the next twenty years," says Yuhnke. "If it operates uncontrolled, the damage threshold for alpine lakes will be consistently exceeded throughout the West."

The State Department and EPA have been leaning on the Mexican government to install control equipment at Nacozari. But for seventy years Douglas has polluted Mexican skies, and Mexico refuses to control Nacozari until Douglas cleans up or shuts down.

In July 1985 EPA announced that an agreement-to clean up both smelters by 1988-had been reached. Yuhnke is skeptical. "First, controlling Nacozari would cost about \$100 million- money Mexico doesn't have. Second, the agreement is contingent upon P-D's shutting down Douglas, which they have refused to do. Third, the agreement is nonbinding. There's nothing there. Yet EPA goes running to the press saying, 'We've solved the problem! Look at us: the action agency! We've done it again.' "

The ultimate lunacy is that the United States, via the International Monetary Fund, is lending Mexico part of the money to build Nacozari. Some conservationists have suggested that we might as well pay to clean it up, too. That proposal has been opposed by Phelps Dodge. "Why should the government shut down a U.S. facility and pay to open one in Mexico?" asks company spokesman Richard Pendleton. The question seems reasonable enough-until one learns that Phelps Dodge has the option of closing the Douglas plant and shipping its ores to a nearby smelter it owns which does have pollution controls. Recently, however, Phelps Dodge did just the opposite: It closed the modern smelter and began shipping *its* ores to Douglas, where, the company said,

complying with federal air pollution regulations was less burdensome.

EVEN IN THE EAST, where they have done a great deal of research, scientists have yet to divine how acid rain damages everything from brook trout to red spruce to the Statue of Liberty. In the West, research is just getting under way, and it will be at least five, and more likely ten, years before the scope of the crisis and the rate at which it is progressing are fully understood. The reason is simple: Acid rain researchers face a daunting array of technical, logistical, financial, and theoretical obstacles.

The major technical difficulty is that the key parameters are so elusive. Watersheds differ. Historical data is suspect. Alkalinities fluctuate seasonally. Lake pH fluctuates daily. There is no reliable method to measure acid falling as dry particles. (This is a critical shortcoming. "Some scientists think dry deposition may equal wet," says John Harte. "If that's the case, the West is really in trouble.")

Logistics are a nightmare. Harte's laboratory is a log cabin. His research assistants need to know as much about lightning as about limnology, as much about Coleman stoves as computers. In the Wind Rivers Alan Galbraith, too, faces tough sledding: He's had to hire a ski mountaineer. Last winter that young man spent five days dodging avalanches while breaking a knee-deep trail through fresh powder to retrieve one eighty-pound snow sample. Measuring the spring pulse can be equally hazardous. Harte doesn't mind skiing uphill on a frozen sun crust, but he hates screaming down. So he has switched to snowshoes.

Federal funding of western acid rain research will be about \$2 million this year. "What is needed," says limnologist Frank Sanders, "is long-term, fundamental, well-organized

research. You don't want to throw money at a problem in a scatterbrained way." But that's just what EPA is doing with its \$5 million Western Watershed Survey, a one-time, purely random sampling of 888 lakes in ten western states. "For that amount of money we could have done a dozen, multi-year, integrated watershed studies," says Harte. "This is just a publicity stunt to make it look as if EPA is doing something about acid rain.

Harte is convinced that "the pickling of the West" is under way. Salamanders, whose disappearance was the first sign something was amiss in the East, have vanished from one of his lakes, too.

At the moment, there is no consensus among scientists on whether the damage threshold has been crossed on a broad scale in the West. Some say no, some say yes; all say they are, to a certain extent, guessing. Nobody, however, disputes the fundamental facts: Acid rain is falling throughout the region; thousands of western lakes-not just in the Wind Rivers-are as sensitive as any in the world; pollution is expected to increase; thus, sooner or later, the damage threshold will be breached-if it hasn't already been.

Because the initial stages of acidification proceed slowly, they are difficult to measure; the final collapse, however, is abrupt. The danger is that by the time a trend can be documented it may, given the glacial pace of legislative remedies, be too late to arrest.

Specific legislation to control acid rain is now being considered by congressional committees, and the growing recognition that acid rain is a national, rather than a regional, problem may carry the day. "The fate of the West is absolutely bound up with the fate of the East," says Yuhnke. "If western congressmen don't get involved as active players rather than spectators, we're not going to break the

legislative logjam."

Looking forward, thirty-one coal fired power plants, five gas-processing plants, and up to twenty-five synfuels projects are scheduled for construction in the West by the year 2000. Although the energy glut has delayed some of these projects, there's reason to believe most of them will be built.

IN 1952 FINIS MITCHELL took a hike. All his life he had wanted to traverse the glaciers in the northern Winds. It was a journey no one had then made and few have repeated since. On the second day out, while descending to a lake in the sheer gorge of the Fremont River, Finis was stumped by a cliff forty feet high. He scouted around and discovered a spruce tree whose top extended close to the brink. "It all looked rosy. So with my seventy-four-pound pack cinched tight to me, I proceeded to leap over and clamber down. Towards the bottom, when I was thinking someone should pat me on the back for such a brilliant idea, a limb broke." He plummeted into the talus below. "Luckily, I landed on my pack, feet and hands up! I vowed right there to call it Suicide Lake."

It was unusual for Finis to have such a close scrape. Despite, or perhaps because of, his penchant for traveling alone, he has always been a cautious mountaineer. "My dad used to tell me: 'Never gamble with your life because you can lose only once: '"

As a backpacker, Finis has a number of idiosyncrasies. In particular, he is not much of a gear freak. His one indulgence is film, as much as eighty rolls for a two week trip. The rest of his outfit is as plain as that of the Amish. His boots are from "Monkey Wards." His overalls are from Sears. Thermometers don't dangle from his zippers, and he doesn't carry a tent. I suspect he thinks Early Winters are hard on

the sheep and Gore-Tex is what Emma wraps his sandwiches in.

On the trail he eats only cold food. "When most people get to camp, they have to cook this, that, and the other thing. And they're damp with sweat, and soon they're shivering to death. I say eat something right now. Get it in your belly, then crawl into that sleeping bag. I carry jerky, candy bars, dried fruit, nuts, and fruitcake-Emma's fruitcake has everything the body needs. For breakfast I carry a sack of Grape-Nuts, Gerber's baby oats, baby rice, Kellogg's High Protein Concentrate wheat germ, powdered cream, and sugar. Now they've got that new stuff, granola, and I throw a little of that in, too. All you have to do is add water."

His recipe for longevity is shorter than that for breakfast: "I don't smoke or drink liquor, coffee, or pop. I refuse to eat foods hotter than my body temperature. The tongue is the guardian of the stomach, you know, and I don't like to put anything on it which makes it uncomfortable."

Finis retired in 1967. During the winter he stayed busy bearing witness for wilderness. During the summer he roamed the Winds. The backpacking boom was getting under way. His queer hobby had become respectable. He began to get some press (*Summit, Backpacker; Sports Afield, The Wall Street Journal*), and then speaking invitations. For expenses only, Finis would gladly travel anywhere to show his slides and pitch the Winds. His formal schooling had ended at the seventh grade, but a prophet does not a PhD require. If some of his homilies were banal, if he butchered his syntax, who cared? When it came to wilderness the man knew-in his bones where he had stood and what he was speaking of. The main idea he had to hawk was the value of wilderness as a panacea for man: "A mountain is the best medicine for a

troubled mind." And for mankind: "Seldom does man ponder his own insignificance. He thinks he is the master of all things. He thinks the world is his without bounds. Nothing could be further from the truth."

In 1975 Finis published a guidebook to the Wind Rivers. The book was illustrated with scenic shots and pictures of trout. One of the latter shows a dozen fish in front of two old-fashioned wicker creels. The trout are so long and fat that the only way to fit them all in would be to stand them on their heads, as if they were loaves of French bread. The book was also unusual in that it had the author's address on the title page. People began dropping by to ask Finis if he would guide them into the Winds.

He frequently said yes. He is, at heart, a gregarious man, and after a lifetime of gentle ridicule and weeks of solitude he welcomed both the adulation and the company. Finis particularly enjoyed introducing children to the mountains. "No better way exists for a child to become self-reliant than to take him into the wilderness," he says. "Teach him to observe nature on every hand, to practice conservation, not destruction, and to protect the rights of all life to live as he himself will do.

"Often children will ask me, 'Who owns all this?' It gives me a lot of pleasure to tell them, 'You own it,' and then watch their eyes. But it's true. It is their land, and I'd like every American to get to know and cherish the magnificent treasure they've been blessed with."

Not that Finis' solo trips stopped entirely. In 1975, when he was seventy-three, he fell into a crevasse as he was crossing a glacier. His knee was wrenched so badly he could not walk. Dragging his pack behind him, he crawled to treeline. He cut off his long underwear and made an icepack. It took two days for the swelling to go down. Waiting, he

whittled a pair of crutches. When they were finished, the codger hobbled out eighteen miles to the road.

JULY 1985: I travel to Wyoming to spend some time with Finis in the Winds. Emma greets me at the door of their home. Tiny, just more than five feet tall, she is a formidable woman. During the 1930s she was the cook at Mitchell's Fishing Camp. Day after day she fed as many as fifty ravenous guests--toiling away at a woodstove inside a sweltering tent. "The men never gave me much credit for it," she says without self-pity. "But it was very hard work." Before they were married, Emma was mistress of a one-room schoolhouse, miles from anywhere. A modest woman, her characteristic attitude toward Finis, who can be vain, is one of bemused tolerance, as if he were an errant schoolboy. She handles his frequent truancy with great good grace. Married for sixty-one years, Mitchells have a playful and loving relationship.

I had taped an earlier interview, and today Finis asks me to delete his cuss words. Wagging her finger at him, Emma pounces: "Now, you shouldn't use those words in the first place." Trying to make peace, I say that damn and other of Finis' favorite expressions are common adjectives in Wyoming. "See, Emma," Finis laughs, "I'm not swearing, I'm just using ad-jeck-tives!" By the looks of her she'd like to give him a swift kick in the butt, but instead she stoically kisses him good-bye as he departs, once again, for the mountains.

Finis is the proud owner of a new Chevrolet Suburban van, and he insists on driving. Leaving Rock Springs, we head north across a sagebrush desert done up in faded pastels toward the Wind Rivers, 100 miles away. Antelope graze by the highway. Golden eagles perch on telephone poles. The

climate here is one of sharp contrasts. Winter temperatures plunge to 40 below, and semis sometimes get trapped in snowdrifts along this road like dinosaurs in a tar pit. In the summer, temperatures approach 100 degrees and heat stroke is a possibility. In all seasons this treeless landscape compels the eyes to squint and the mind to look inward. Glancing at Finis, I think of him crossing this desert for the first time eighty years ago.

After a while, Finis turns off the highway, crosses a cattle guard, and stops the car. "That's it," he points, "the old wagon road." I conjure up an image of a towheaded boy driving a mule team through the sagebrush toward us. For a moment the past is present: Finis' lifetime seems as tangible as that rippling road bound for the horizon. Contemplating his mortality leads me to mine. I find it hard to breathe.

Continuing north, Finis spices his stories with brief tirades. He complains about subdivisions, James Watt, David Stockman, stockmen, Compound 1080, and air pollution. He talks a lot about "mankind." I ask him how he thinks we're doing. "Not so good, kid. At our present rate of exploitation of the Earth, only famine and death can be our ultimate destiny." We've become "too greedy," he says.

He gets more ebullient as we drive into the Wind Rivers. We stop to greet Vivian Fish, a fifty-eight-year-old Forest Service volunteer. Finis is fond of women. They are fond of him. (In his wallet he carries pictures of some of the comely young women he has guided through the Winds: "You're never too old to look.") Holding Vivian's hand, he begins to spout stories like an effusive whale. Charmed by the twinkle in his eye, she decides to accompany us to the Sacred Rim, a viewpoint Finis discovered in 1929.

Finis dons his hiking boots and grabs his walking staffs. Because he leans so heavily on them, he wears elkskin gloves

to keep from blistering his hands. As we mill about in the parking lot, a climber from Kansas recognizes Finis and asks him to autograph a copy of *Wind River Trails*. The book is sprinkled with the author's homilies. For example, "We don't stop hiking because we grow old, we grow old because we stop hiking."

Sadly, Finis has begun to disprove that one. Although he has never stopped hiking, he has grown old. He carries his years, we carry his pack. Moving slowly, head bowed forward, Finis swings his walking sticks as if they were ski poles. Knowing that he used to walk forty miles in a day, one might pity this hobbling man, except that his presence, his being here at all, seems so noble.

We branch off on a faint track. Finis creeps down into a small gully, then, sticks flailing, lunges up the other side. At the top he leans on his sticks, hangs his head, gasps for breath. In places the trail is obscured by deadfalls. Finis negotiates the larger trees by sitting on them and stiffly scissoring his legs over. Every few hundred yards he stays seated to take a rest and tell a story or two.

Mentally, Finis is as agile as ever. He points out a place where a bear has plundered a squirrel's nut cache; a buck's bed; a moose track; a blue grouse--"See that fool hen." In another place he bends over and rakes his head along a slender tree, demonstrating for Vivian how elk in velvet rub their antlers.

We come to a stream. Finis flops down beside it. He pulls a small, battered measuring cup out of the pocket of his blue chambray shirt. "Sometimes, above the timberline, you'll hear water trickling through a rock pile. You can thread this down and get some."

While telling the story about the girl he was guiding who got lost-"She wandered around until she found a

meadow. Then she set up her tent and went to sleep. What did Emma call her?" -he stumbles over the word, "dingbat." Apologizing, Finis says, "Since my stroke I don't talk so good." We tell him we can't tell the difference. "That's because I couldn't talk worth a damn anyway. Now don't go putting down those ad-jeck-tives!"

Eventually, we reach the Sacred Rim. The panorama, which encompasses more than 200 square miles of wilderness, is breathtaking. During his life, Finis has explored every drainage in sight. At our feet is a U-shaped gorge, 2,000 feet deep. At its bottom, three lakes are connected by two cataracts. Finis says that the middle lake is Suicide Lake where he fell out of the tree in 1952 'The Good Lord has had His hands on me all my life,' he says. In the distance is the Continental Divide, strung with six of the seven highest peaks in Wyoming. The highest summit, capped by a shining glacier, is Gannett Peak, which Finis last climbed eleven years ago.

Vivian asks if she's too old to climb Gannett. Finis says no, of course not, and explains the route, in great detail. When he is finished, he pauses, then moans, "I'll never be on Gannett again." His anguish is so palpable, Vivian and I exchange startled glances. Finis gets to his feet and climbs a nearby outcrop. Lying on his belly, he peers into the canyon below. The spirit so willing, the body so weak.

He's come full circle. As a boy he longed to explore the Wind Rivers. It is a longing he has indulged for eight decades-from Teddy Roosevelt to Ronald Reagan. But the longing was never sated, it just grew more acute. Now, unable to carry his own pack, Finis can only prowl the fringes of the range. He is homesick for the ridges high in the sky, and for his bighorn friends. Walking away from the rim, Vivian says, "I think it was determination that took you to all

those places." Gently correcting her, he says, "It was love."

At camp, it looks like rain. We offer to pitch a tent for Finis to sleep in, but he won't hear of it. Jabbing with his walking sticks, as if grubbing for potatoes he smoothes a pile of duff in the lee of a boulder. When he's done he says, "I've made my outfit. Let it rain. I'm waterproof."

In the morning we shoot some pictures of Finis sitting by a dead snag -he and the tree have both seen better days, but they're still clinging tenaciously to this Earth. It strikes me again what a rare and worthy thing it is for a man to devote his entire life to exploring a mountain range, for its sake and his.

Hiking out, Finis says, "My heart and lungs and breathing capacity are outside this world. But my legs aren't so good. In the old days I'd jump from rock to rock, always positive. Now, I can't step over a toothpick withal my knees going out. Without these sticks I'd fall down every hundred yards. But this is my life. I love the wilderness. I think the more I stagger around out here, the longer I'll live."

As much as anyone I've ever met, Finis is passionately attached to life. He knows his time is growing short, but he has his heart set on making it to his one-hundredth birthday. "I want to kiss all the good-looking girls who congratulate me," he says. "Emma tells me by then I won't be able to tell which are the good-looking ones. I tell her I'll just kiss them all." He is already issuing invitations. In the time I spend with him, he invites Vivian; Terry Moore, the *Audubon* photographer; Terry's wife, Suzi, also a photographer; Suzi's kids, Morgan and Brady; and the man from Kansas. If Finis makes that summit, perhaps he will--as he has done on so many others--read one of what he calls his "word studies." Maybe this one, a favorite:

Only as man watches the unwary

*clouds drifting aimlessly, or gazes at
the countless stars in his celestial surroundings,
will he observe his real self.*

*Not until he can visualize himself as
but one of the multitude of creatures
roaming the Earths crust will he cast
aside greed, love his fellow man, and
live as God designed.*

Finis will celebrate his one-hundredth birthday on November 14, 2001. Will he make it that far? If he does, will trout still dimple the surface of Wind River lakes? Or will acid rain have returned them to their previously barren state? The ending to his saga has yet to be written.