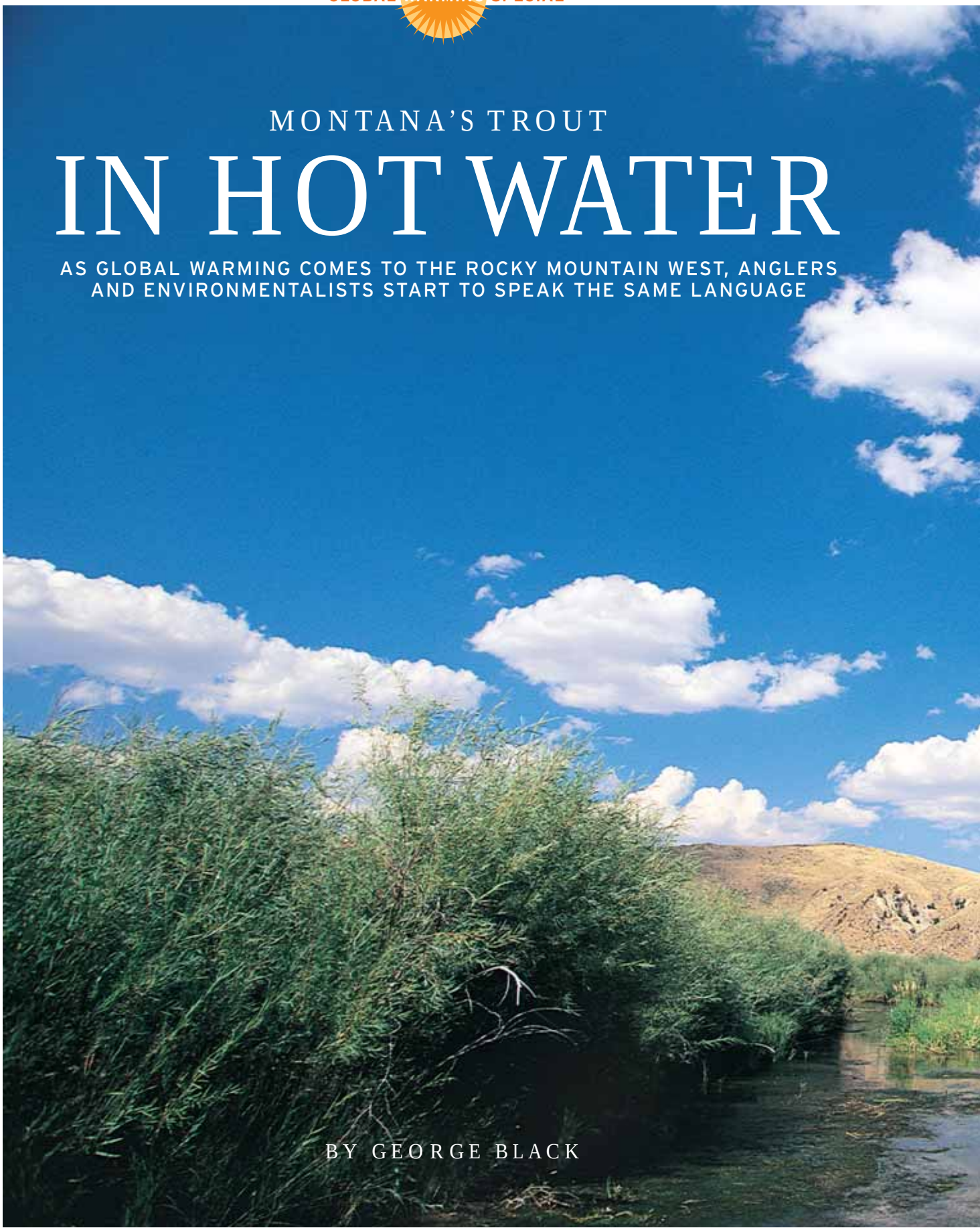
MONTANA'S TROUT

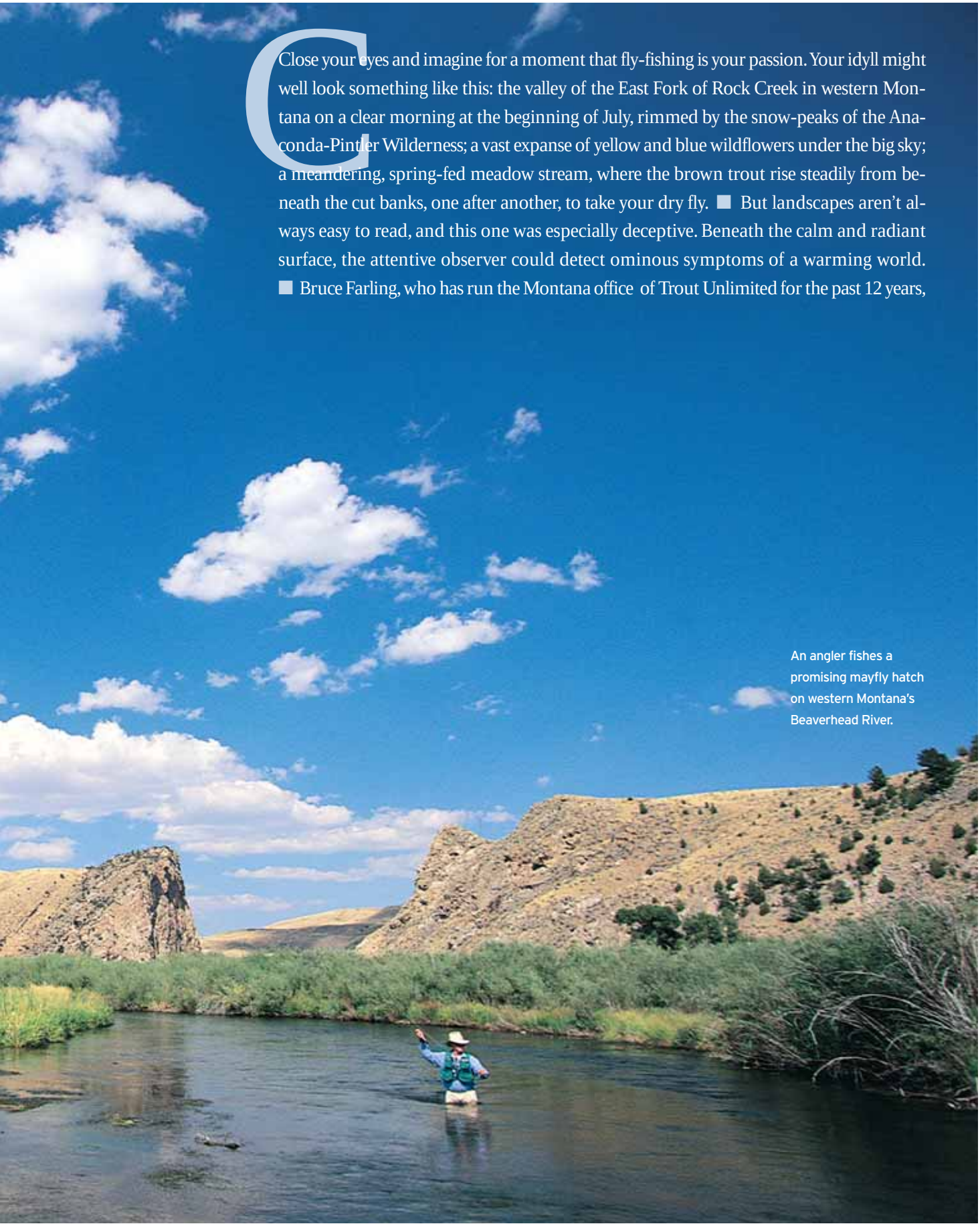
IN HOT WATER

AS GLOBAL WARMING COMES TO THE ROCKY MOUNTAIN WEST, ANGLERS AND ENVIRONMENTALISTS START TO SPEAK THE SAME LANGUAGE



BY GEORGE BLACK

Close your eyes and imagine for a moment that fly-fishing is your passion. Your idyll might well look something like this: the valley of the East Fork of Rock Creek in western Montana on a clear morning at the beginning of July, rimmed by the snow-peaks of the Anaconda-Pintler Wilderness; a vast expanse of yellow and blue wildflowers under the big sky; a meandering, spring-fed meadow stream, where the brown trout rise steadily from beneath the cut banks, one after another, to take your dry fly. ■ But landscapes aren't always easy to read, and this one was especially deceptive. Beneath the calm and radiant surface, the attentive observer could detect ominous symptoms of a warming world. ■ Bruce Farling, who has run the Montana office of Trout Unlimited for the past 12 years,



An angler fishes a promising mayfly hatch on western Montana's Beaverhead River.

BRIAN O'KEEFE

told me that he sees the signs of global warming all around. Like the rest of the Rocky Mountain states, Montana has now suffered through seven straight years of drought. "We haven't had an 'average' snowpack since 1997," Farling said. "It used to be common for us to have a couple of weeks every winter when it would go to 30, 35 below. These days it hardly ever falls below zero." The winter had also been abnormally dry, he added: "Precipitation in western Montana in February was the lowest ever recorded." But then late snows whitened the peaks again in April and May, and June brought downpours. The Flathead Valley, an hour north of Missoula, experienced its wettest June in more than a hundred years. By the end of the month, most rivers were bank-full torrents. Things had gone from one extreme to another, in other words, which is why Farling prefers the term "climate disruption."

Conditions such as these have a way of limiting the angler's options. On Montana's biggest rivers—the Missouri, the Madison, the Yellowstone—you're pretty much restricted to scudding along in a drift boat, hurling big flies at the bank. Chuck-and-chance, some people call it, and it's never much appealed to me. I opted instead for the Bitterroot, the Blackfoot, and Rock Creek, all of them tributaries of the Clark Fork of the Columbia River, which flows through downtown Missoula. You could use each of these rivers, Bruce Farling said, as a diagnostic of global warming.

BROWN TROUT

WESTSLOPE CUTTHROAT TROUT

When Montanans enumerate the threats to their rivers, global warming has not been high on the list. That's understandable, perhaps, since the assaults have been so various. Thanks to Western water laws, entire sections of some rivers run dry in summertime, when ranchers take what they need for irrigation. The seven-year drought, of course, has made matters worse. On top of this, clearcutting has denuded many hillsides, filling rivers with sediment and suffocating trout spawning beds. The Clark Fork, meanwhile, is still blighted by the Butte and Anaconda copper industry, even though the mines and smelters have been closed these 20 years and more.

Just as global warming hasn't been uppermost in the minds of fly fishers, so trout streams haven't been of great concern to environmentalists. One of the few exceptions was a 2002 report published jointly by the Natural Resources Defense Council and Defenders of Wildlife, which estimated that global warming might cause the loss of anything from 5 percent to 30 percent of trout habitat in Montana by the year 2090. (The forecasts for New Mexico and Arizona, whose cold-water streams are home to the rare Gila trout, are even more dire.) But as Farling pointed out to me, the report's findings were based only on projections of air and water temperature; a variety of other negative factors weren't taken into account, ranging from loss of snowpack and decreased precipitation to disease, habitat fragmentation, and changes in predator populations.

Trout are an iconic species for Montanans. Pick up your rental car, check into your motel, and someone is likely to hand you a piece of promotional literature embellished with quotations from Norman Maclean's book *A River Runs Through It*, which was later made into a movie by Robert Redford. Maclean's novella celebrates the Blackfoot River, and the line they like best for the tourist brochures is the one about there being no clear line between religion and fly-fishing. Sportfishing contributes almost $300 million a year to Montana's economy, and you will often see the trout on custom license plates. "Montanans like to make a statement through their vehicles," Bruce Farling said wryly. "The message is: I like trout."

The Blackfoot is an interesting example of what can be accomplished when people steer clear of mutual stereotyping—when, for example, "tree-huggers" make common cause with the "hook-and-bullet crowd." In 1998, the Montana legislature passed a ban on the destructive process of cyanide heap leach mining, effectively barring Phelps Dodge of Arizona and Canyon Resources of Colorado from building an open-pit gold mine on the upper reaches of the Blackfoot. This was nothing short of astonishing, since hard-rock mining had dominated Montana politics for the better part of a century and contributed mightily to the state's sense of itself as the last wild frontier. Last November, the mining interests came roaring back with a ballot initiative, I-147, aimed at repealing the ban. Canyon Resources pumped more than $3.5 million into the fight, more than had ever been spent on a political campaign in Montana, with publicity that emphasized jobs, a healthy economy, and a "common sense" approach to the environment (a turn of phrase that is also popular in Washington these days).

Conservation groups, meanwhile, scraped together a war chest of $400,000—and proceeded to crush I-147 with 58 percent of the vote. This, too, was astonishing, since George W. Bush took the state last year by a 20-point margin. Tracy Stone-Manning, executive director of the Clark Fork Coalition, told me, "It was the finest coalition of conservationists, ranchers, and summer residents we've ever seen. Bruce at Trout Unlimited was just determined to make it work. And it did."

The message from the Blackfoot was this: Think carefully before you decide who is an adversary and who is a friend. Ranchers, like anglers, may not strike most environmentalists as natural allies, and many of those in the Blackfoot Valley almost certainly voted for Bush. But it turned out that the key to saving the valley was its historic pattern of land tenure. Large tracts of privately owned ranch land—which have often been in the same family for a hundred years or more—connect seamlessly with public lands and designated wilderness areas.

TOP: FLORIAN SCHULZ; BOTTOM AND OPPOSITE: BRIAN O'KEEFE

There's a certain irony here. On other great Montana trout streams, those who might regard themselves as conscientious environmentalists have sometimes helped to impair the very landscapes they cherish. The classic example is the Bitterroot. In recent years, Montana has become a magnet for out-of-staters, both full-time and seasonal residents, drawn here in search of clean air, spectacular mountain views, and outdoor recreation. In downtown Missoula, I stopped to chat with Jeff Crouch, a young architect who designs traditionally styled log homes for these newcomers, many of them in the Bitterroot Valley. "More than half of my clients are from California," Crouch said, "and all of them fly-fish. It's the single biggest reason they come here." Many of the wealthiest newcomers have bought up properties along the riverfront.

The Bitterroot is—or was—as gorgeous a valley as you could contrive, the river winding its way northward between the sheer granite peaks of the Bitterroot Range to the west and the gentler Sapphire Mountains to the east. But a hundred years ago, in sharp contrast to the vast ranches of the Blackfoot, much of the flatland here was subdivided into apple orchards, a reflection of the Bitterroot's more benign climate. Twenty-acre lots became the norm, and that encouraged denser development. The mountains are still spectacular, but Route 93, which runs due north to Missoula, disfigures their beauty: Fly shops, upscale real estate agents, and espresso bars rub shoulders with billboards, mini-malls, and fast-food logos—the ugly street furniture of any American landscape.

OLIVE SCULPIN

GRAY WULFF

The proximity of Missoula, with its urban chic, is a further draw. These are not people who want to hole up in a cabin in the wilderness and fight off grizzlies. "Over the next 20 years or so," Crouch said, shaking his head, "with all this population growth and new subdivisions, we're facing a real crisis of urban planning here in Missoula. I don't know how it's going to turn out. But the Bitterroot itself is done, it's shot. We're turning it into Southern California."

Despite the presence of so many of his constituents in the Bitterroot Valley, you'd hear much the same complaint from Bruce Farling. "What you have to bear in mind," Farling said, "is that we're not a fishing club; we're a group of conservation-minded anglers." That translates into an agenda with which environmentalists would feel entirely comfortable.

The most striking thing about Farling, I thought, was his emphasis on the health of the aquatic ecosystem as a whole, rather than on trophy fish. Most visiting fly fishers are drawn to Montana by the fantasy of catching a gigantic brown or rainbow trout. But those species aren't natives; they are exotics, introduced here a century or so ago to provide sport, and Farling seems almost disdainful of them. He'd much rather talk about leopard frogs, long-toed salamanders, macroinvertebrates, and "our obligation to protect their life-support system."

Above all, he worries about the native trout of these mountains: the bull trout (federally designated as a threatened species) and the westslope cutthroat. As much as anything, he said, it is a matter of heritage—a comment that made me recall the cutthroat's Latin name, *Oncorhyncus clarki lewisi*.

Global warming is the thread that ties together many of Farling's anxieties. When he talks about "protecting cold-water habitat," the emphasis is definitely on the cold. On the national level, Trout Unlimited has lobbied for clean water and the preservation of roadless areas; it has worked to repair the damage from acid mine drainage and denounced the reckless pace of oil and gas development along the Rocky Mountain front. But on global warming the Montana council has been out in front of the national organization, which has yet to take a position on the issue.

In addition to reducing trout habitat, global warming will disrupt the balance among species, favoring exotics over natives. Warmer temperatures will drive the sensitive cutthroats to higher altitudes and more restricted habitat; the non-native brown trout, meanwhile, will take over former cutthroat waters, since it can tolerate temperatures 1.4 degrees Fahrenheit warmer than those that will kill the native fish.

"There's a U.S. Geological Survey thermograph at the mouth of Rock Creek," Farling said. "They've been collecting data on stream temperatures for about 25 years now. The data isn't publishable yet, but it's clear the rise in temperature is quite dramatic."

I mentioned that I'd been fishing on Rock Creek just the day before. "What did you catch?" he asked.

"One big rainbow," I said. "Otherwise lots of browns."

He nodded; I'd proved his point.

Rock Creek, I knew, also has high levels of whirling disease, which struck Montana's trout streams in the mid-1990s. Whirling disease is caused by a microscopic parasite , *Myxobolus cerebralis*, which attacks a young trout's central nervous system and cartilage. The parasite's initial host is the small tubifex worm, which lives in streambed silt.

"Well," I said brightly, "at least that has nothing to do with global warming."

Farling shook his head vigorously. "Oh, but it does. Whirling disease is directly related to climate change. The worm's production of spores depends on temperature. Also, when we get more snowmelt and higher year-round river flows, it appears that the trout survival rate is higher because the spores are dispersed. When there's a drought, on the other hand . . ." He left the thought unfinished.

On my last day in Montana, I told Bruce Farling that it was time for me to fish Norman Maclean's river, the Blackfoot. Since the river was still running high from the rains, I asked his advice on a good place to go wading. He recommended a road crossing just downstream from the town of Ovando. As drift boats zipped past in the deep, fast midstream currents, I poked around in the shallow bankside riffles. The water was icy cold, and every single fish I caught was a native westslope cutthroat.