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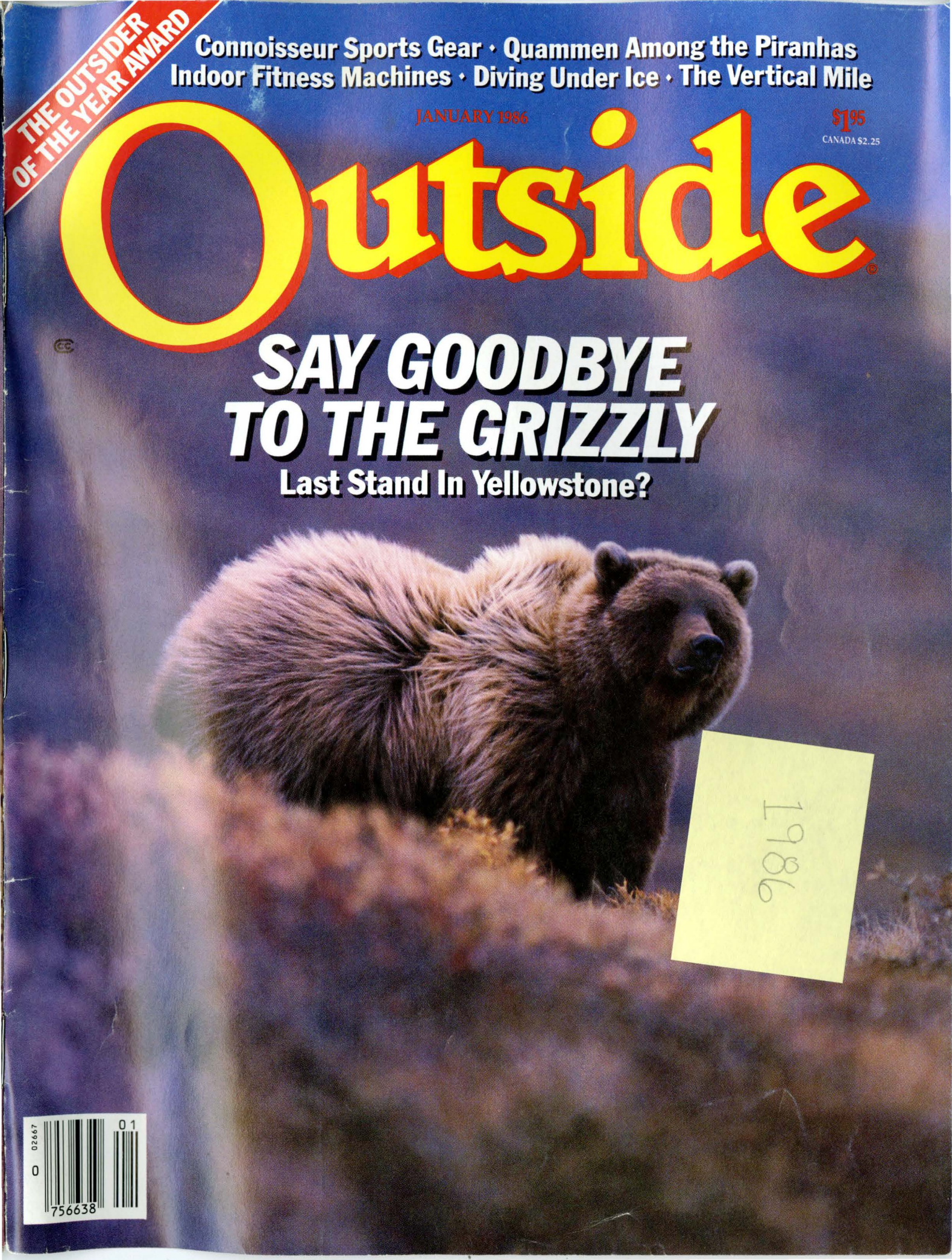
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# Outside

## SAY GOODBYE TO THE GRIZZLY

### Last Stand In Yellowstone?



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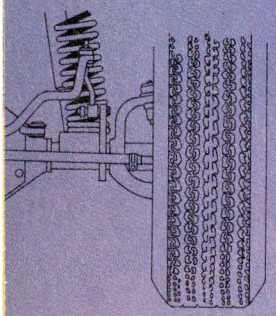
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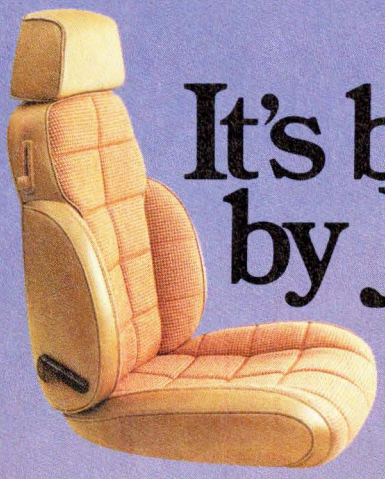
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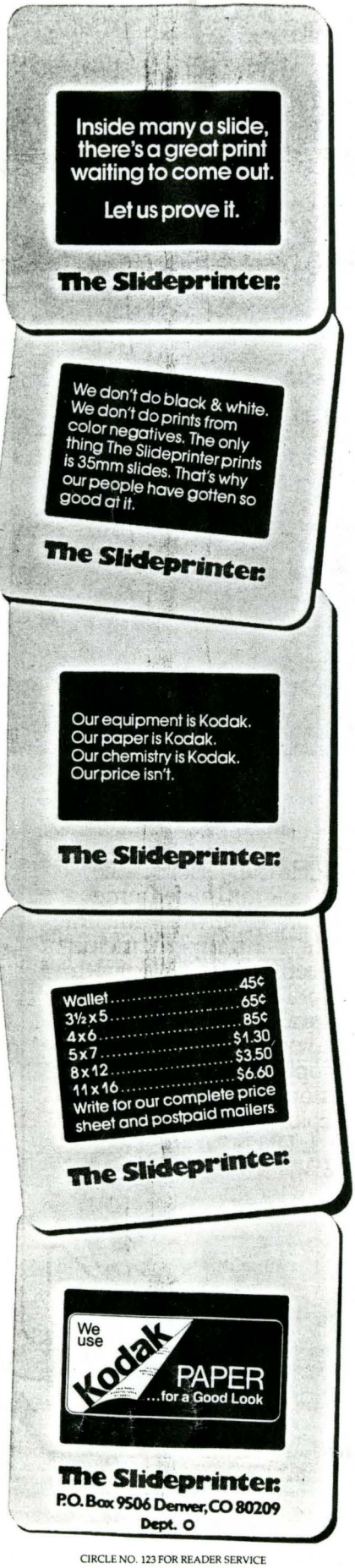
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CIRCLE NO. 123 FOR READER SERVICE

# LETTERS

## The Bears of Yellowstone

Congratulations to Alston Chase for seeing through the lies and cover-ups of the National Park Service ("The Grizzly and the Juggernaut," January). His study confirms what many Park Service employees had suspected all along. I spent five seasons as a laborer in Yellowstone and the stories of unnecessary grizzly deaths multiplied every year. The bureaucrats and rangers seemed proud of the mortality rate of the bear population, even to the point of bragging about how many bears they had personally killed.

Unfortunately, longtime bear "managers" and rangers have skulls as thick as the stacks of paperwork they have created. I'd like to ask them: "How natural are traps, tranquilizers, and government relocation?" It's time for new blood to handle this national tragedy, people who are concerned about the grizzly and not their own reputations. This problem needs to become one of national concern before it's too late.

*Janice Schaffner*
*Glenwood Springs, Colorado*

Being a big-game hunter, I realize all too well there are two sides to the grizzly management program. I have been fortunate enough to have seen one grizzly in the wild in my life; I hope to see another, and I want my three boys to have at least a chance to see one, too. If it means opening the backcountry dumps to perpetuate the species, then there should be no doubt as to what to do.

*Thomas Heller*
*Midland, Texas*

I would have thought of "garbage bears" as unnatural and therefore unacceptable before reading Chase's article. But "ecocenters" would help concentrate and maintain the grizzly in remote areas of the park, and they are much more acceptable than starving, roaming bears in search of food. They would also reduce grizzly/man contact and therefore the number of bear attacks.

*Clay G. Spencer*
*Lansing, Michigan*

When Congressional hearings were held in October 1985 on the concept of a "greater Yellowstone ecosystem," the grizzly bear was constantly portrayed as a symbol for creating greater interagency cooperation and communication. Yet, in reading Alston Chase's bear article, the uninformed reader would be led to believe that these same agencies—Park Service, Forest Service, Fish and Wildlife Service, together with private organizations such as the National Audubon Society—have used this new air of cooperation to plot against the grizzly in smoke-filled back rooms, hidden from the public eye.

What Chase presents in "The Grizzly and the Juggernaut" is one part truth to four parts distortion, yielding a product that appears to be the truth while pressing home a point that is far from reality. From the first sentence to the last, Chase vents his spleen in a diatribe against the Park Service and others who stand between him and his pastoral vision of grizzly bears feasting on garbage as tourists crowd the grandstands. The author has masterfully distorted and misstated the facts of each and every incident referenced, from the Frank Island bear incident to "secret" Interagency Grizzly Bear Committee meetings.

I offer four brief examples to illustrate Chase's mistreatment of grizzly bear management. The article opens with a sow grizzly and her three cubs stranded on Frank Island in Yellowstone Lake as park officials look on with disinterest. In truth, a decision was made to rescue the bears when the bears were discovered on June 26, 1984. The decision to move the bears was made June 29. The rescue came on July 5 with the delay attributable to logistical planning, not to letting "the situation develop naturally" as Chase would have the reader believe. Second, no grizzly bear article would be complete without a recital of bear number 15 and the death of a camper at Rainbow Point Campground. While Chase lists the possible culprits for turning a "good" bear bad as hunger, angel dust, or too much trapping and tranquilizing, he conveniently omits the major reason grizzlies kill humans—*garbage.*

Of the last 11 grizzly-caused human deaths in the United States and Canada, which involved ten bears, eight are confirmed to have been garbage-habituated bears. The same is likely true with number 15. According to the investigation team, there is strong evidence to suggest that number 15 was the bear repeatedly raiding unsecured garbage within 200 yards of the campground during the previous week. Third, Chase also stated that "during the summer of 1985 another 13 grizzlies—five of them female—died." Official 1985 figures for Yellowstone at present list six human-related mortalities, four of which were female. And finally, regarding "secret IGBC meetings," every IGBC meeting has been well attended by both conservation groups and members of the general public. I have attended every IGBC meeting.

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# LETTERS

Yellowstone today, and there is little doubt that the weaning process was traumatic for the bears involved. However, if there is error here, the mistake was made the first day park rangers condoned the artificial feeding of bears, not the day the park took the positive action of forcing bears to kick their junk-food habits.

*Amos S. Eno*
*Director of Wildlife Programs*
*National Audubon Society*

*Alston Chase replies: When a bear is sighted near a road in Yellowstone, rangers are dispatched within minutes, by helicopters, to trap and move it. Yet the final decision to remove the grizzlies from Frank Island was not made until after officials had made three visits to the island and had held two meetings. My account of the reason for this delay is supported by a draft report of the Wildlife Committee of the National Park System Advisory Board. In a critical review of the Frank Island incident, the committee commented: "Managers knew of the sow and two cubs on the island and were aware of the developing of a deteriorating nutritional situation. First, the NPS decided to let the situation develop naturally. Later, managers chose to attempt to relocate the bears to the mainland. One cub died. This incident and resulting indecision reflects poorly defined objectives by the NPS in addressing such a situation."*

*In other words, the committee was observing that while the Park Service has a policy for removing problem bears, it has none for rescuing them. Indeed, the park's entire wildlife management policy is based on allowing nature to take its course. This was the rationale, for instance, for the Park Service's refusal to intervene when Yellowstone's bighorn sheep were infected with pinkeye (an easily treatable disease), causing the loss of 60 percent of the population of this rare species in one winter.*

*Grizzly number 15, which killed Mr. May, was indeed, as Mr. Eno suggests, a "garbage bear." I noted as much in the article. But Mr. Eno should ask: Why did this animal become "addicted" to garbage? Both the government and the Audubon Society still mistakenly assume that if we exterminate garbage grizzlies, the bear problem will disappear. But as nearly every bear eventually becomes a "garbage bear," destroying these scavengers will not only eliminate the problem; it will also eliminate the entire grizzly population. When my article went to press, the official 1985 tally of grizzly mortalities for the Yellowstone population was as it appeared in the article: 13 bears, including at least five females (the gender of six was unknown). Now Dr. Knight acknowledges one death was "double-counted." Hence the present estimate is 12 dead. Six of these deaths, as Mr. Eno notes, were "human-caused."*

*Experimentation with "aversion training" is hardly a secret. After all, it has been widely reported in the newspapers. The Interagency Grizzly Bear Committee meeting at which the decision was made to give this project to the state of Wyoming, however, was closed to the public. This is not unusual. Although recently, authorities, to their credit, have been far more open than in the past, the history of this sad controversy has many examples of such closed meetings. I myself was "disinvited" to a meeting of the IGBC's predecessor, the IGB Steering Committee, in February 1983.*

In the ten years I have been reading your magazine, I have not seen a more disturbing report than "The Grizzly and the Juggernaut." You can help the grizzly bears' plight further by listing the names and addresses of the agencies that should be contacted to protest criminal bear policies. I'm sure there are thousands of your readers who would gladly put pen to paper in pursuit of this most just cause, especially after reading such a saddening—and maddening—article.

Thank you, to both *Outside* and Alston Chase, for sounding the alarm. Maybe it is not yet too late to help.

*John S. Krtil*
*New York, New York*

*Editor's note: The author suggests first writing Secretary of the Interior Donald P. Hodel, Department of the Interior, C St. between 18th and 19th, N.W., Washington, D.C. 20240, and then your own congressman and senators.*

## A Ringer for the New Year

Congratulations on the content of the January issue! Steve Fonyo's Journey For Lives was impressive, notwithstanding how long it took for the Canadian Cancer Society to jump on the bandwagon. The runners-up were equally interesting, and the grizzly exposé was an appropriate commentary on our bureaucracy. Raves on most everything else, too, from the Medicine Bow Mountains to the piranha world. And if I'd wanted to spend my bucks on a home gym, your informative review of them would have saved me much grief and maybe a couple hundred in market hype.

*Bruce Nolin*
*Chestertown, New York*

*We welcome comments from our readers. Correspondence should be addressed to the Letters Editor, Outside, 1165 N. Clark St., Chicago, Ill. 60610. Letters may be edited for clarity and space.*

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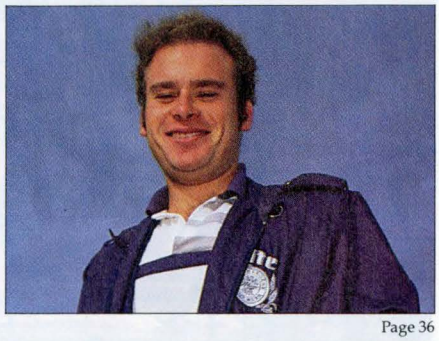
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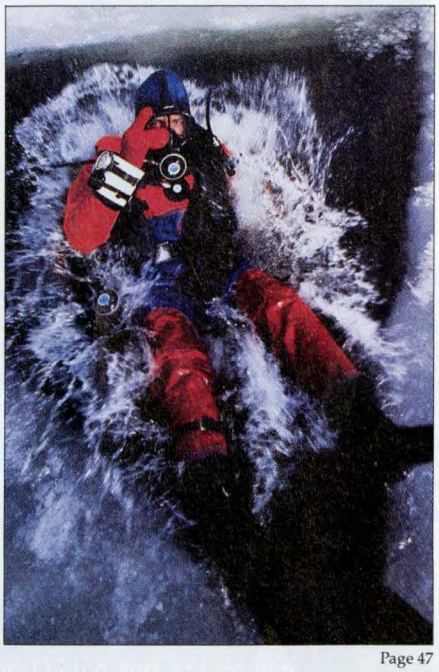
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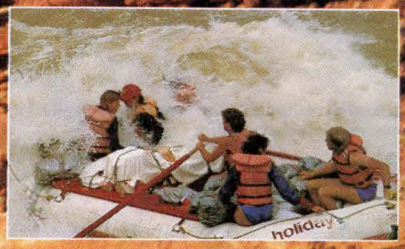
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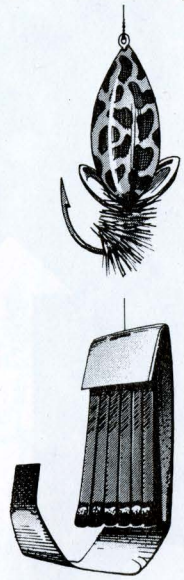
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# BETWEEN THE LINES

## COMING OF AGE

This month, two big projects come of age: our first Outsider of the Year award, and our most ambitious investigative piece ever.

First, our cover story. As some of you may know, the Yellowstone grizzly bear is in very serious trouble. The commonly accepted reasons are hunting and poaching, a deteriorating habitat, and encroachment by civilization. But in fact, the roots of the problem are simpler—and more tragic.

Alston Chase, college professor turned free-lance writer, has spent the last five years investigating the sad lot of the Yellowstone grizzly. After more than 800 interviews, his conclusion: Grizzlies are dying because we are killing them as a matter of policy, either starving them outright or destroying those which, in their search for food, have become unmanageable. Incredibly, that policy has enjoyed the support of the federal government and major environmental groups for 17 years—and it has nearly succeeded in eliminating the bear from Yellowstone. Chase's report, which will appear in larger form in his book *Playing God in Yellowstone* (Atlantic Monthly Press, March 1986), begins on page 28. It is the longest and most controversial piece of journalism we've ever run, and perhaps the most significant.

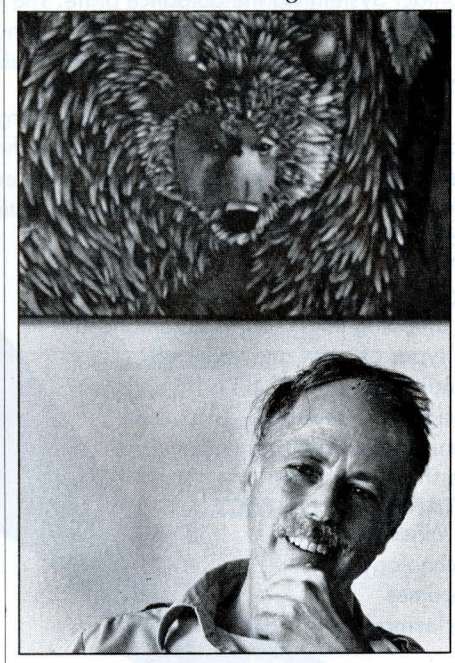
For Chase, the sacrifices made to get the story have been especially great. In 1981 he and his wife were forced to sell their ranch on the Smith River in Montana, a spread 55 miles from the nearest town and 25 miles from the nearest telephone, because of the difficulty of doing research from there. "The ranch was so isolated," Chase recalls, "that we had every major mammal in America except the grizzly and the wolf on our land. The animals were so unused to seeing people that they came right up to the house.

"But to do my research on wildlife," he concludes ironically, "I had to give up my own little piece of wilderness."

SPEAKING OF SACRIFICES AND ACHIEVEments, last March we launched our search for the first Outsider of the Year. We asked our readers to nominate individuals who had shown significant personal accomplishment in sports, natural sciences, expeditions and adventure, or environmental preservation. Among the letters we received were nominations for scientists, legislators, and lobbyists; athletes and coaches; journalists and poets. Mothers nominated their sons, daughters nominated their fathers, and one woman even nominated herself—for having endured the pain of childbirth!

*Outside* editors culled through the letters and narrowed the list down to 14; the judges voted, and Steve Fonyo emerged victorious. Fonyo is the 20-year-old Canadian who last year raised $11 million for cancer research by running across Canada. That in itself is a remarkable achievement, but Fonyo had lost a leg to cancer when he was 12; he wore out six prosthetic legs on his run. His story (and those of the four runners-up) begins on page 35.

We sent contributing editor David Roberts to Calgary to interview Fonyo. "He had no idea he'd been nominated," Roberts reports, "and he was quite astonished to find out he'd won." In spite of Fonyo's reputation with the press for being a bit cranky, Roberts found him to be a pleasant fellow, "relatively unspoiled, given the media attention he's received."



*On man and grizzly: Alston Chase*

CLIFF WILLIS

But Roberts did have one misgiving: Over the course of the visit, Fonyo, who recently won second prize in a demolition derby, took Roberts for a spin around town in his '84 Toronado. Says Roberts: "He drove like a wild man."

Perhaps it's a good thing for all of us that Fonyo decided to run across Canada instead of drive.

Lawrence Kutler

EDITOR-IN-CHIEF

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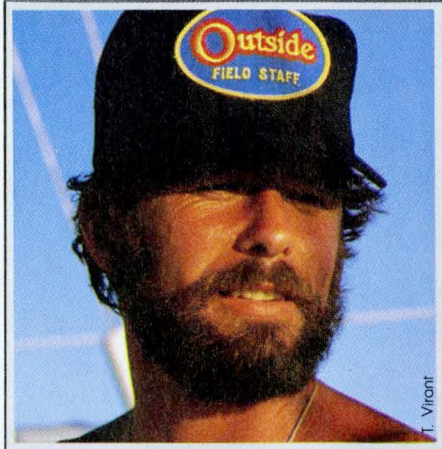
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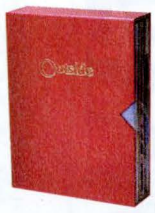
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# LETTERS

## Europe Aid

Lito Tejada-Flores's article "Edging Into Europe" (October) is excellent work. Short, pointed, and with no nonsense, the article not only entertained but informed, a most beautiful combination. I have been trying to decide for quite some time whether to take a ski trip in Europe. If I do decide to go, this article will be of great help.

*Richard Yeng*
*San Francisco, California*

## Mountain Views

After reading Mr. Gabriel's article "The Cliffhangers" (October), I must address some of the issues and details concerning the May 1983 ascent of Mount Everest. I have no intention of taking cheap shots at David Breashears or of lessening the magnitude of his accomplishment. David is indeed a fine climber and was a great asset to the expedition.

As I remember the summit day, David was quite content to remain at the South Col while Gerry Roach, Larry Nielson, Sherpa Ang Rita, and I carried the camera gear to the top for the summit shots. However, Gerry and I decided (quite independently) that it was unfair to leave David at the Col and extended an invitation to him, which was eagerly accepted. The camera gear was divided somewhat equally among us until about the 27,500-foot level, where David radioed base camp to say we were turning back due to bad weather and snow conditions. He had not consulted the rest of us in his decision to retreat. I knew that I would never be this close to the summit of Everest again and that I had to continue on, even though it would be dangerous and time was running short. I also convinced Gerry and the Sherpa to continue, and David took all the camera gear and turned back. We had traveled only a short distance when David called to us that he had changed his mind. The camera gear was again divided at the Hillary Step, which David led flawlessly.

My point is that we all helped each other on that summit day, and "the other climbers" were not selfish prima donnas who were dragged helplessly to the summit by the heroic cameraman, as the article implies.

Ironically, the outdoor film industry seems to have evolved in such a way that the stars are the people behind the camera, not those in front of it. Perhaps that is why, two years later, David is well known and much in demand, and I, as one of "the other climbers," am wondering who will support our 1986 Colorado-Kangchungtse expedition.

It is my sincere hope that Redford's Willi Unsoeld film will portray a realistic account of Thomas Hornbein and Unsoeld's remarkable, and in many ways unequaled, ascent of the West Ridge and reverse the negative image of mountaineers the media seem intent on projecting.

*Peter Jamieson*
*Durango, Colorado*

## Greater Plains

I'd like to thank Rob Schultheis for exposing some of the natural wonders of the northern Great Plains ("The Great Plains," Destinations, October). But as a native North Dakotan, I feel that just mentioning that "Theodore Roosevelt National Park also has large tracts of badlands" is a severe understatement. Not only do the Badlands of North Dakota follow the Little Missouri River for more than a hundred miles, but the difference in topography is substantial. As Roosevelt himself once said, "These curious hills have a rugged, fantastic beauty all their own."

*Mark Glaser*
*Fargo, North Dakota*

## Breathing as Art

I was greatly intrigued by Paul Perry's article on Ian Jackson ("The Well-planned Breath," Bodywork, November), who has really only rediscovered the benefits of controlled breathing, which centuries ago was mastered by Hindu and Buddhist meditation experts.

As a student of Zen Buddhism, I had always loathed running for conditioning until I discovered that by applying the rhythmic, controlled breathing techniques used in *zazen*, or sitting meditation, I could run much farther and experience much less boredom and "suffocation anxiety" than before. I also found that varying the breathing pattern was essential. Now I usually start out with a three-stride inhale and a three-stride exhale, and gradually lengthen the exhale to four and five strides as I warm up. Of course, it helps to alter the pattern as the terrain changes. Running has, as a result, become downright pleasant!

*Paul W. Howard*
*Middletown, Connecticut*

*We welcome comments from our readers. Letters to the editor should be addressed to Letters Editor,* Outside, *1165 N. Clark St., Chicago, IL 60610. Letters may be edited for clarity and space.*

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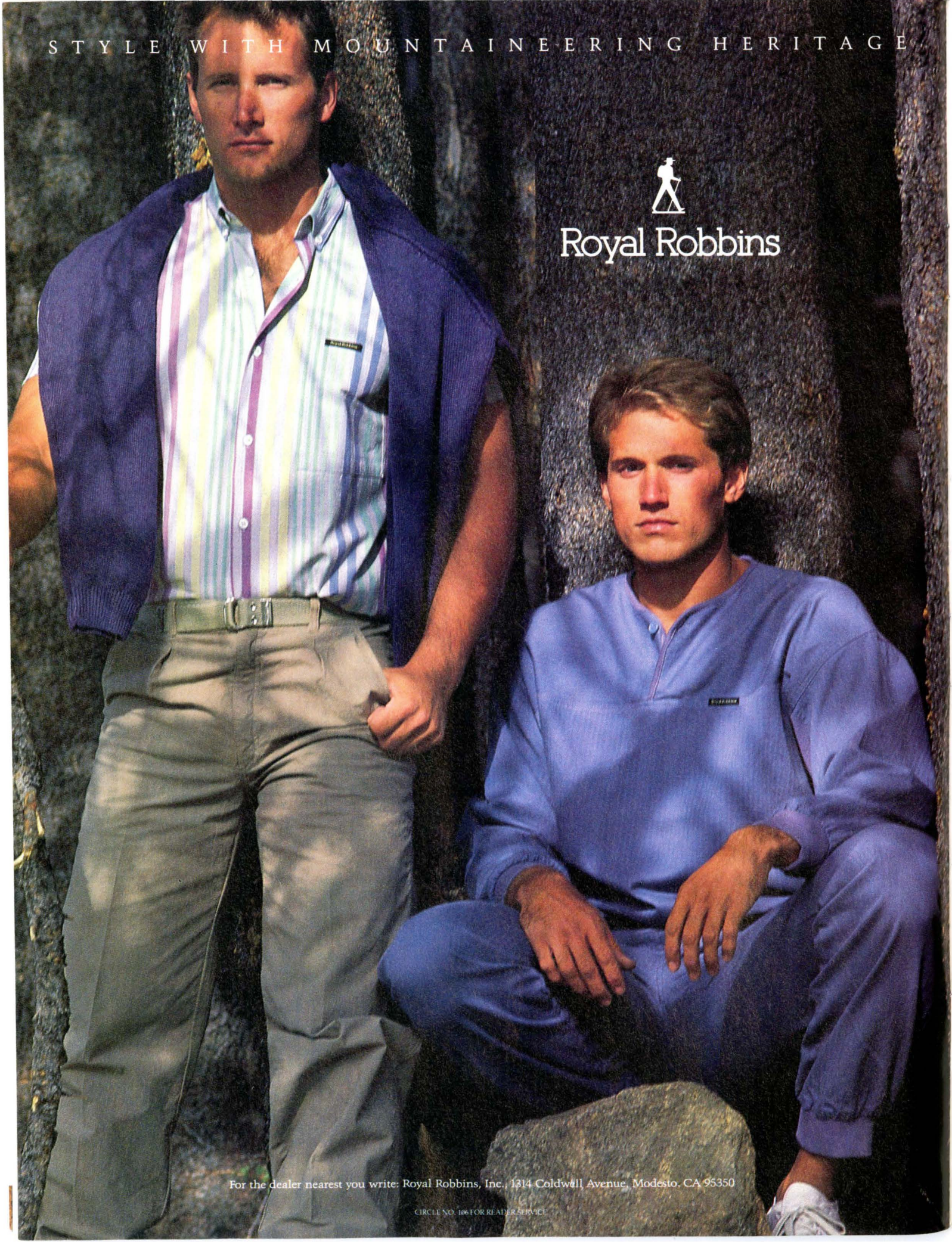
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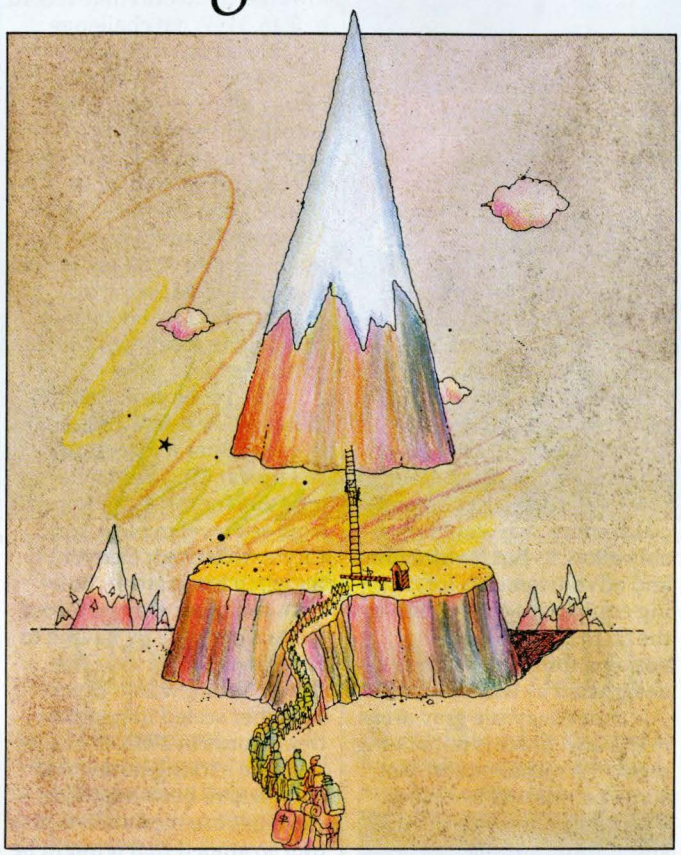

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# DISPATCHES

## NEWS FROM THE FIELD

CLIMBING

## King of the Hill



DAVID POVILAITIS

Mount Rainier's dramatic 14,410-foot rise above Puget Sound inspires approximately 7,000 people a year to attempt its summit, making it one of the most sought-after peaks in North America. Because the ascent is relatively easy, most try for the top on their own. But a significant minority —about 1,500 in 1984—are willing to pay for help. These people choose Rainier Mountaineering, Inc. It's an easy choice: RMI is the only guide service on the mountain.

RMI has been the sole guide concessionaire on Rainier for most of the past 34 years. In August the Park Service again renewed RMI's contract, extending it "preferential rights" to all guiding above 8,000 feet for another seven years. Although bids were solicited from other outfitters, and several companies expressed interest, only one, Leavenworth Alpine Guides, bid against RMI for the concession. To no one's surprise, LAG lost.

"It's impossible to compete with RMI and get the concession," explains Jim Donini, former owner of LAG and a spokesperson for Open Rainier, a group attempting to persuade the Park Service to allow other outfitters on the mountain. The amount of time RMI has spent on the mountain alone gives it an edge, says Donini, discouraging others from entering the bidding. "Of course RMI had the better bid," says Katherine Kemble, who now owns LAG. "The bidding system is set up in its favor."

In fact, federal law does allow a current contractor preference over other bidders in renewals, park officials say, to ensure some continuity. "If a competing bidder makes a better offer," explains Stephen Crabtree, chief of concessions for the Pacific Northwest region, "then the existing contractor has the opportunity to match that offer; and, if it did, we would award the contract to the existing concessionaire."

But can one outfitter handle the business? According to Dunham Gooding, director of the American Alpine Institute, many of their regular clients would like to stick with them for a climb of Rainier and are frustrated when they can't. "It's a logical follow-up to their training." Says Kemble: "We get about 300 people every year wanting to climb Rainier. When RMI gets booked up during the summer, people start looking for an alternative. That's when they come to us."

Lou Whittaker, co-owner of RMI, says that having the only guide concession on the mountain has been lucrative —the company reportedly grossed $340,000 in 1984— but that isn't the reason he wants the bidding system left intact. "It's the philosophy of the Park Service to protect the environment, not to make the park into a commercial opportunity," Whittaker says. "I can understand the others wanting to be here, but if I were an independent climber, I wouldn't want to have to deal with guided climbers on every route on the mountain."

Donini insists that protecting the mountain from too many guides hasn't been an issue in other national parks. On Mount McKinley, he points out, seven guide services work the mountain, and in the Tetons there are two guide operations. Rainier, says its park management, is different. It is only one peak, rather than a range (such as the Tetons), and isn't as technical as McKinley.

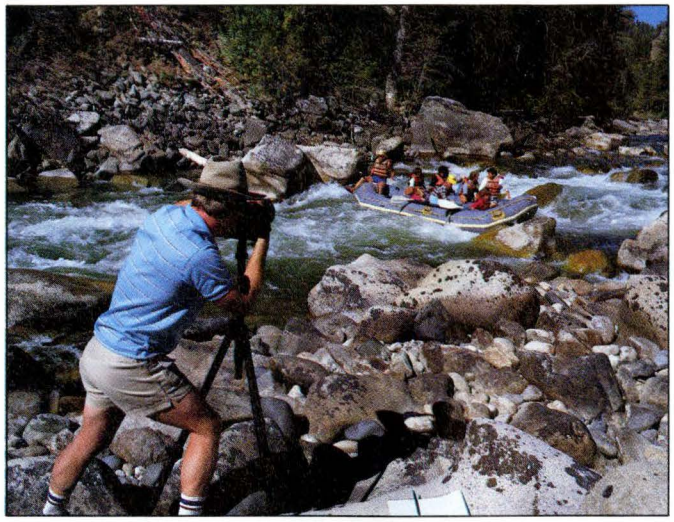
"This is a free-enterprise society," Donini says, "and RMI has a monopoly. It's that simple. I have nothing against RMI; they are good at what they do, and we have no desire to get rid of them. We just want to offer something different."

**—Jeff Smoot**

## EAR TO THE GROUND

*They say vile things to people—things I wouldn't repeat to you—and they have no fear.*

**—Julian Mencken,** a New York City resident, on the conduct of bicyclists in midtown Manhattan.



*Shuttered out: no more pictures for profit in the wilderness*

RON RUDOLPH

## PUBLIC SECTOR
# No Pictures

Leave only footprints, take only pictures" has long been the guideline for clean campers in national parks and wilderness areas. Now a new interpretation of the Wilderness Act by the U.S. Forest Service may make this time-honored phrase obsolete.

Ken Klusmire found out about the change when he was asked to stop photographing boaters on the Middle Fork of the Salmon in Idaho. The problem, Klusmire was told, was not that he was taking the pictures, but that he was selling them to the rafters at his store in Stanley. Because this constitutes a commercial enterprise, and the Wilderness Act of 1964 prohibits such ventures in designated wilderness areas, the Forest Service told Klusmire to take his camera elsewhere this summer.

Klusmire says he'll appeal the decision. "I wonder how much trouble the Forest Service would have given Ansel Adams, whose pictures of wilderness scenes sell for more money than I'll ever see," Klusmire complains. "Would they stop Disney, *National Geographic*, or Jacques Cousteau?"

Although Klusmire is one of the first to be asked to put down his camera, he won't be the last, says Frank Elder, special officer for the Forest Service. "If the production were a documentary for educational or scientific purposes and not a commercial venture, we would probably allow it. But feature films and advertisements for camping equipment can be shot in the 80 to 90 percent of national forest land that is not designated as wilderness."

Some may see gray areas in the law; Elder is not among them. "We understand that some people will be taking pictures in the wilderness, and if some are sold, so be it," he says. But, he adds, the Forest Service has to draw the line somewhere. "We will not permit 'Mr. Photomat,' for example, to sit at the rapids and sell pictures later."

Klusmire agrees with legislation designed to keep the wilderness untrammeled, but insists that his photography is in harmony with the spirit of the law. "I don't see how I detract from the wilderness," he says. "I follow all the Forest Service rules, stay on trails, and use no natural resources, except a little light." **—Ron Rudolph**

## RUNNING
# The Vertical Mile

The four-minute mile fell to Roger Bannister a generation ago, and it's been falling ever since. Two runners—John Walker in New Zealand and Steve Scott in the United States—have run more than 100 sub-four-minute miles each. Last summer Britain's Steve Cram lowered the world mile record to 3:46.31. What challenge remains at this distance?

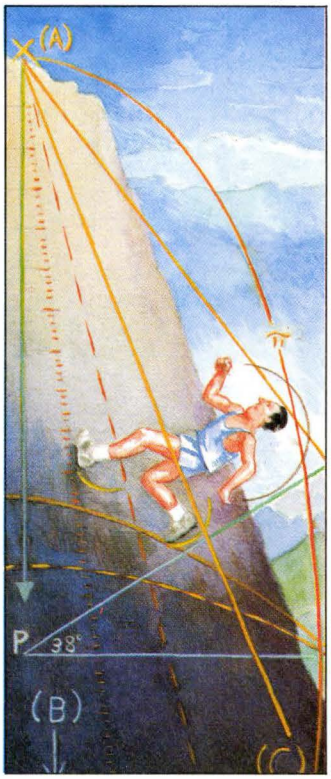
The *vertical* mile, suggests mountain runner Ken Young. He wants to run it—or climb it—in one hour. But the biggest challenge, says Young, who operates the National Running Data Center in Tucson, Arizona, is not in merely clambering up 5,280 vertical feet in 60 minutes, but in locating a suitable mountain.

The problem is a matter of degree. If the pitch is shallow, a runner may run fast, but too far. (It would take months, for instance, to run from sea level in New York City to mile-high Denver.) If the pitch is too steep, however, a climber may be forced into a slow pace by having to climb instead of run. (The Grand Teton, which Bryce Thatcher scaled in just over three hours in 1983, is a case in point.) Young hopes that somewhere between these extremes is a mountain with a trail so angled that it might be done in one hour. "It would provide a challenge where the talents of runners and climbers meet," he says.

Young began thinking about the vertical mile one summer in Boulder on the running trails on Green Mountain. He had developed a friendly rivalry with mountain climber Gerry Roach to see who could run to the top the fastest. While consulting a topographical map one day, Young noted that on his fastest ascent he had covered one stretch of 2,000 vertical feet in 22 minutes, a rate of 1.5 feet per second. Projecting that over 5,280 feet, Young realized he might be able to do a vertical mile in an hour—except that Green Mountain was not high enough. Pikes Peak, among other Colorado mountains, is easily high enough, but its flat stretches force the runner to run too far—the New York-Denver factor—and its altitude impedes performance.

To be runnable/climbable in an hour, Young estimates, a mountain must rise approximately 1,000 feet per mile—about five miles of running/climbing to ascend 5,280 feet. The way Young figures it: "A thousand feet per mile is a 20 percent grade, one-to-five, pretty steep, a backbreaker. One of my engineering friends estimated the effort as one-third horsepower. I don't know if it can be done. There must be somebody, somewhere, strong enough to do it. But first we need to find the mountain."

**—Hal Higdon**




TOM LULEVITCH



JERARD VANDYSTADT/ALL SPORT

*Extended: For Christophe Profit, climbing the Matterhorn, the Eiger, and the Grandes Jorasses was all in a day's work.*

EXPEDITIONS

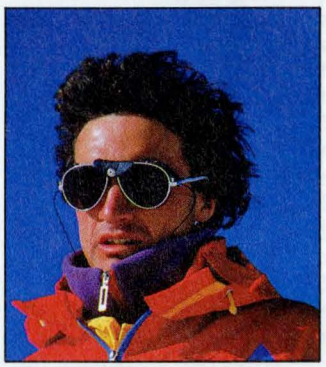
# Alpine Grand Slam

When Gaston Rébuffat struggled to the top of the Eiger Nordwand in 1952, it took him three days and the assistance of a team of eight roped climbers. It was worth it: Rébuffat became the first person to climb all three of the Alps' legendary north faces—the Eiger, the Matterhorn, and the Grandes Jorasses. Others have since repeated Rébuffat's feat, but in July—a month after Rébuffat died of cancer—a 24-year-old climber from Chamonix, France, paid tribute to him in a remarkable way.

Christophe Profit soloed all three great nordwands in a single day. That's not one face per day, understand, that's all three faces—13,000 vertical feet of nasty rock and ice spread across Italy and Switzerland—in a single 24-hour period.

He started at the bottom of the Matterhorn's north face at midnight on July 24, reached the summit at 4 A.M., and was back down at the Hornli Hut an hour and a half later. From there a helicopter whisked him off to Kleine Scheidegg, where, despite treacherous verglas that coated crux pitches in the Ramp and in the Exit Cracks, he climbed the Eiger Nordwand in seven hours.

In spite of such speed, Profit has said, he is never careless. "Before each difficult pitch I think carefully about what I must do. I don't want to be a victim, to fall as a result of inattention." His



*Christophe Profit*

concentration proved appropriate on the Eiger. "At one point I was in the midst of a pitch of very difficult ice, alone, in the night, when my headlamp went out. If I had begun to tremble, I would have certainly fallen." Later he traversed across a 60-meter ice field "with just the tips of my crampons penetrating the very black ice."

Then, after only a five-minute rest on the summit and a 35-minute glissade down the Eiger's west flank, Profit again jumped into a helicopter and this time was flown to the Grandes Jorasses, a 13,800-foot peak in the Mont Blanc massif above Chamonix.

Profit had originally intended to follow the classic Walker Spur route to the Jorasses summit, as Rébuffat had when he climbed the wall in 1945. Negotiating the

DOMINIQUE RADIGUE

verglas on the Eiger, however, had put Profit behind schedule, so in the hope of disposing of the final nordwand before his 24 hours expired, he opted to follow the Shroud, a shorter and more direct route up the face. "The waterfall pitch (on Walker Spur) was coated with verglas and extremely difficult and exposed. At that point, because of how tired I was, I began to think about climbing the Shroud," Profit recalled in *Alpi Rando*, a French climbing magazine. It had taken the legendary Rene Desmaison nine days in 1968 to make the first ascent of the Shroud, but at 11:30 P.M., four hours after starting up the Jorasses and 23½ after beginning his Matterhorn ascent, Profit crested the summit ridge.

## SOCIAL CLIMBER

Dispatching the three great north faces in a day was by no means Profit's first astounding feat in the mountains. In 1982 he soloed a 3,000-foot, 5.10 route on the Dru's west face in three hours, and in 1984 he made a solo ascent of what may well be the most difficult ice climb in the Alps, the Hyper Couloir on Mont Blanc.

Because of his spectacular climbs, Profit has become something of a celebrity in France. A film of his ascent of the Dru was released last year, he has twice appeared in the pages of the trendy magazine *Paris-Match*, and a book is being written about his life by his girlfriend, Sylviane Tavernier, who this year became the first woman to be certified as a French alpine guide.

For his next feat Profit is planning to accompany Reinhold Messner later this year to an unclimbed route on the south face of Lhotse (the world's fourth-highest peak), a wall that Messner calls "the last great Himalayan problem." If they make it, look for a speedy ascent.

**—Jon Krakauer and Marc Francis Twight**

## ENVIRONMENT

# Wet Suit



KEVIN POPE

Some environmentalists are blaming them for the death of a federal wilderness bill in Colorado—and future wilderness acquisitions in the state. Officials of the Sierra Club Legal Defense Fund say they were just doing their job.

The goal was to stop water from being diverted from or above Colorado wilderness areas. Sierra Club officials feared that demand for water from the Boulder–Colorado Springs population belt would eventually turn the state's wilderness areas into high-elevation deserts. In January 1984 they initiated a suit against the U.S. Forest Service to force it to file for water rights for each designated wilderness area.

Now, two years later, the courts have yet to make a decision, and the powerful subcommittee on public lands, headed by Senator Malcolm Wallop of Wyoming, has said it will not consider more wilderness legislation in Colorado if that would mean locking up water that the states may eventually need.

Sierra Club officials acknowledge that the resulting loss of last year's Colorado wilderness bill was unfortunate. But it's hardly their fault, they say. "The water community in this state has done a good job of using the suit as a whipping boy for an agenda that has nothing to do with water," says Maggie Fox, Rocky Mountain regional director of the Sierra Club in Boulder.

"There may be some finger-pointing at the Sierra Club," agrees Michael Scott, a wilderness specialist with The Wilderness Society in Washington, D.C. "But this suit would always have come at a bad time politically," he adds. "If they'd waited until the process of creating [federally protected] wilderness was complete, the water issue would have become moot, and we'd have no way of protecting wilderness water anywhere."

Other wilderness supporters are more bitter about the Sierra Club's role in the virtual wilderness lockup. "The suit was ill-advised" says Robert Weaver, coordinator of a panel of environmentalists established by Colorado Governor Richard Lamm to mediate water disputes. Any court ruling, says Weaver, is likely to be appealed to a higher court or Congress anyway. "Ultimately," says Dan Luecke, regional director of the Environmental Defense Fund in Boulder, "these kinds of battles are won in the political arena, not the courtroom."

Moreover, say critics, the suit is guarding against a situation that is unlikely to occur. Water diversion from mountain wilderness often occurs near high divides, making upstream diversion impractical or impossible, and land-use restrictions prevent the use of equipment necessary to build dams and install pipes in areas already designated. Still, there are 25 current proposals to divert water from or above wilderness areas in Colorado.

While the suit goes on in the U. S. district court in Colorado, about half of the land waiting for federal protection is already being managed as if it were wilderness. On 567,000 acres of the remaining 1.2 million acres proposed for protection, however, timber sales are pending, and oil and gas leases are nearing approval.

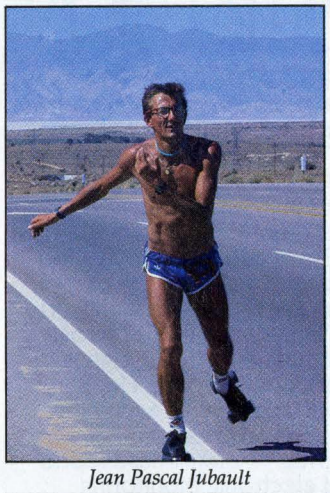
But Sierra Club officials are confident that, in the end, their suit will prove to have been a wise strategy. "Critics have a doomsday attitude that we've missed the boat on the last chance to add to the wilderness system," says Lori Potter of the club's Legal Defense Fund. "But the wilderness system will continue to expand. This (the water dispute) is just a temporary blip on the screen." **—Bryan Abas**

## ADVENTURE TRAVEL

# Skating Away

More than anything it was a good way to see America, the three Frenchmen explained. They had just completed their second crossing of the United States on roller skates.

Jean Pascal Jubault, Antoine de Givenchy, and Phillippe le Corvec had first skated the country—from sea to sea—in 1983, starting in Newport, Virginia, and taking off their skates 3,200 miles later in San Francisco. But that trip left them unsatisfied—with an urge to see the country from north to south; they started their second tour in Great Falls, Montana, and rolled their way across the Rockies to San Diego.



JIM PIZZADILI

*Jean Pascal Jubault*

Their trip last summer took them through a number of national parks and monuments. "We wanted to see the best scenery," Jubault says. In Yellowstone the men on wheels were surrounded by a herd of bison one morning and learned firsthand that it is possible to roller skate amid buffalo. In Colorado they rolled up the road that ascends 14,260-foot Mount Evans and may have become the world's highest roller skaters.

The three men packed their gear on a bicycle and shared the pedaling, rotating two days on skates and one day on the bike. Although riding the bike hardly qualified as a day off—the load came to 95 pounds—it did provide a change of pace, the skaters say. It took the men 65 days to see the country, including the time spent rolling across Death Valley in August.

In spite of the bad roads, severe heat, and steep grades, the men downplay the difficulty of skating across the United States. Nothing is more dangerous than skating on their own continent, the Frenchmen say. "In the U.S.A. skating is safer and more fun, even in Death Valley," Jubault says. "Here, people are friendly and often stop to talk or offer help. In Europe there are too many crazy drivers who drive fast and resent anybody else on the road."

For the winter, anyway, the men have hung up their skates. But they are looking ahead to summer and, Jubault says, are "thinking about Alaska."

**—Jim Pizzadili**

## SPORTS

# Mush, She Said

Susan Butcher was everyone's pick to be the first woman to win last year's Iditarod, the 1,177-mile sled dog race from Anchorage to Nome, Alaska. Instead, her dogs were attacked by a moose that killed two of them and wounded five others. Butcher withdrew and waited to hear who won the race. It wasn't Rick Swenson, four-time winner of the event, but Libby Riddles, then a virtual unknown, who pressed her dogs through a storm to claim $50,000 and the honor of being the first female victor.

Butcher will have a chance to challenge Riddles January 8, when the two duel it out in Minnesota. The fourth annual John Beargrease Sled Dog Marathon—a 383-mile contest along Lake Superior's north shore from Duluth to Grand Marais and back—is mild compared with the Iditarod, but it may be the only race between the two women in 1986. (Riddles's partner, Joe Varney, will be racing their dogs in this year's Iditarod.)

Butcher's nemesis, Rick Swenson, will also be competing, making the showdown even more interesting. The Butcher-Swenson rivalry has a history. In 1982 Butcher placed second to Swenson in the Iditarod. Though they compete fiercely, however, the two are friends: When Butcher married last August, she chose Swenson to be her "bridesmaid."



KEVIN HORAN

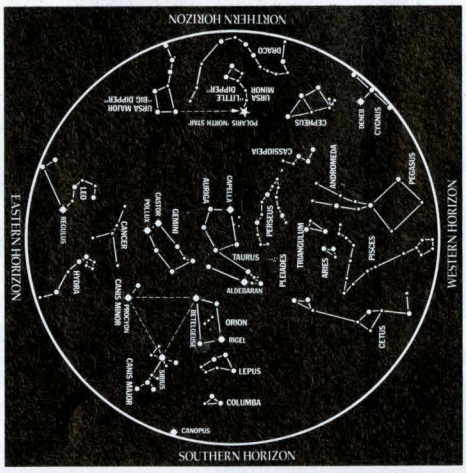
*Libby Riddles*

Mushers from the Lower 48 are delighted to be getting a crack at the top Alaskans. But they're less enchanted with the fact that the three are each receiving a $6,000 traveling stipend from sponsors lined up by Bob Bright, a musher himself and director of sports marketing for Flair Communications in Chicago. Bright, who is credited with much of the success of the world-class America's Marathon/Chicago, must have mixed feelings about lining up such talents. Bright says that he will also be going for the winner's share of the Beargrease's $25,000 purse.

**—Paula Schiller**

## STARGAZING

Early January will be a prime time for observing Halley's Comet in the northern hemisphere. Although the comet will be brighter with a more prominent tail in the spring, it will also be more difficult to see as it sinks lower and lower in the sky. In early January the comet should be visible low in the southwestern sky after twilight. It may be possible to observe the comet's tail with the use of binoculars. The comet will become very difficult to see with the naked eye soon after the new moon on the 10th, which will also be in the southwestern sky. The full moon will occur on the 26th, obscuring the comet completely, so try to see it before the middle of the month.




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# Stalking the Gentle Piranha

## *An intimate link in the Amazon lowlands*

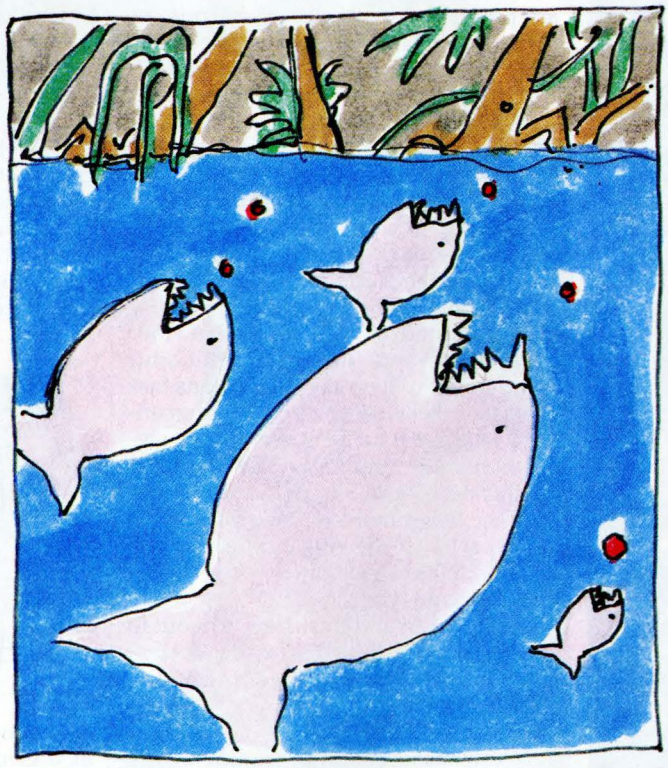
By David Quammen

To get there, you follow the Rio Aguarico downstream out of the Andes, past a petroleum boomtown called Lago Agrio, where the vultures congregate by dozens and hundreds over the municipal dump. When the last cruising vulture disappears from view behind the forest canopy at a bend in the river, you will find yourself surrounded by unspoiled Amazon jungle.

The oil companies, the timber cutters, and the would-be cattle barons haven't gotten quite this far quite yet. In the treetops will be toucans and monkeys; on a snag near the bank you might, with luck, see a basking anaconda. To go where you are headed you will be traveling, of necessity, by dugout canoe. If it happens to be a long, sturdy log of a boat with a 55-horse Evinrude mounted on the rear, the downriver leg of the journey will take only a couple of days. The Rio Aguarico is a broad, shallow river that flows caramel-brown with suspended sediment—the same color and consistency as the upper Missouri during spring runoff—but the Zabalo, its tributary, is narrow and deep and black. The blackness signals dissolved acids, steeped from rotting vegetation or leached from soils in the swampy lowland forest that the Zabalo slowly drains.

The mouth of the Zabalo is where your real adventure will begin. You will turn there and ease off on the Evinrude, heading upstream through a winding jungle tunnel like Marlow in search of Kurtz. Except you yourself are merely in search of a fish dinner.

The idea is that the diner will be you and the role of entrée will go to the fish, though the reverse is also a possibility. This little blackwater stream, the Zabalo, is full of eager piranha.



MINDY BALL

*The feast of fishes: a fragile connection*

Your guide, if he is a good one, will inform you that the Zabalo is no place for a noontime swim; better to wait until you are back on the Aguarico, where the worst to expect is that you might step on a stingray in the shallows. For that matter, today on the Zabalo you'll want to refrain from so much as dangling a hand overboard.

A YOUNG MAN NAMED RANDY BORMAN WAS our guide for the trip, and a good one. The son of missionary parents from the United States, he had been raised in a small Cofan Indian village just downriver from Lago Agrio, where he blossomed into the Huckleberry Finn of the upper Amazon. He was fluent in the Cofan language, adept in their traditional skills of jungle subsistence, and pragmatically grateful for the Evinrude clamped to the back of his 40-foot dugout. He had just enough American hellion in him to drive that canoe like it was a souped-up '59 Dodge. As the Zabalo narrowed, and our passage upstream seemed blocked by fallen trees that lay floating across the channel, Randy would merely back the canoe off to a distance, then crank up his outboard to full throttle and charge ahead, planing out, vaulting boat and a dozen passengers over each log like it was a water-ski jump. If he hadn't lifted his motor clear at just the right moment, we would have all been paddling with palm branches on the return trip.

But finally came a log barrier too high for even the best hot-dog canoe jockey, so we made a lunch camp there on the bank. Hand lines were brought out, as well as a couple of fishhooks of roughly the same size and gauge as the hook on a coat hanger. Randy balanced his way barefoot out along the log barrier to a spot in midstream, two feet above the blackwater surface of the Zabalo. He was joined there by his compadre Lorenzo, a shy Cofan man who on formal occasions wears a red feather through his nasal septum and at other times a baseball cap reading OKLAHOMA SOONERS. Lorenzo was chief petty officer on this voyage, and a master fisherman. Then those two were joined also by me, an incurable fool for angling of any sort.

The bait of choice was large chunks of hard salami. It released savory oils into the water and if you gave it a bit of action—some twitches and jerks, like the spasmodic effort of a small wounded fish—all the better. The first piranha to strike simply bit that coat-hanger hook in half.

So far this was not much like casting a dry fly to the snooty trout on Odell Spring Creek. My own touch was slow and inept. In truth, I was preoccupied with keeping my balance on that log: To

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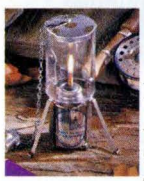
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set the hook on a fish only to somersault backward into the Zabalo would have seemed a hollow triumph. But Lorenzo and Randy knew their craft and before long they had hauled in three robust piranha, each one as big as a football, each one snapping its jaws at every finger or foot that came near. After the third of these in ten minutes, I tiptoed carefully back to the bank.

That evening, along with our stewed caiman, we ate roast piranha. They were bony but delicious. I saved the lower jaw from one of them, and it sits on the desk before me now. The teeth are pyramidal, each with a sharp point and a single razorlike cutting edge. Perfect for clipping away mouthfuls of flesh from the side of a fish or a mammal—and perhaps surprisingly well suited to another function also.

I tell this whole story because several matters of science underlie it, the least interesting of which is that the piranha, as advertised, can be a dangerous little creature with an eclectic palate for meat. I knew that before seeing it so vividly demonstrated, and you know it, too. More fascinating, and more significant, is the complex of ecological relations that has lately been discovered to interconnect four separate elements of our vignette: certain piranha species found in blackwater rivers like the Zabalo, subsistence fishermen like Lorenzo, certain tree species of the lowland jungle, and the floodplain development projects like those at Lago Agrio.

The forest and the fishes turn out to be more closely linked, in parts of Amazonia, than scientists had previously realized.

FOR A SIZABLE SEGMENT OF EACH YEAR, THE lowland forest throughout much of the Amazon basin is covered by flood water, in some places up to 40 feet deep. Depending upon the area, it may remain there from two to ten months. This cycle of drastic but regular flooding is the result of geologic and meteorologic conditions that are not duplicated on any other continent. The ecological consequences of that flood cycle, which has annually repeated itself over millions of years, seem also to be unique on the planet.

To begin with, a large portion of the Amazon basin is extremely flat. From the Peruvian border to the Atlantic, the river drops only about 250 feet. There are exceptions to that overall flatness, of course—most notably, the Andes. North of the main trunk of the river rises another formation, a modestly elevated area known as the Guianan Shield, and to the south is a similar uplift called the Brazilian Shield. Lying in among these three zones of high ground is the great Amazon floodplain. Rainfall is prodigious throughout the entire drainage, ranging between about 60 and 120 inches per year. As a consequence, the Amazon river system contains one-fifth of the total amount of river water on earth.

So much water in a rush to the sea, so much flatness—and the ineluctable result is flooding. Every year during the wet season roughly 30,000 square miles of the Brazilian Amazon are covered with standing water. This land is known to ecologists as the flooded forest, and to rural Brazilians as *igapó*. Brazilian fishermen, in particular, have good reason to be familiar with igapó.

Over the epochs, the plant species of the flooded forest have had to adapt themselves to this regularly recurrent inundation. They now live semiaquatic lives. Seedlings, saplings, and shrubs must—and do—survive being totally submerged for months of every year. Full-grown trees resist drowning despite having their roots and lower trunks covered; some species have developed special respiratory roots that top out above the flood level, like cypress knees in a Georgia swamp. But coping with floodwater itself is not the only problem those trees face. They must also cope with seed-eating fish.

*DURING THE WET SEASON 30,000 SQUARE MILES OF BRAZILIAN AMAZON ARE COVERED WITH STANDING WATER.*

During every wet season fish in great number and variety invade the flooded forest, searching for food. They come chiefly from the nutrient-poor blackwater rivers, such as the Zabalo, and other streams so impoverished of minerals and small aquatic organisms that no real food chain can be supported; they come, hungry and desperate, to feed on the seeds and fruit that fall from those igapó trees. Feasting voraciously, they build up fat reserves to help carry them through the rest of the year. In some fish species, the seeds and fruit taken during flood time may account for almost their total annual sustenance. And of course these fish, like the trees, have in the passing of time adapted themselves especially to this way of life. A delicate and mutually satisfactory balance seems to have developed.

Ecologist Michael Goulding, after

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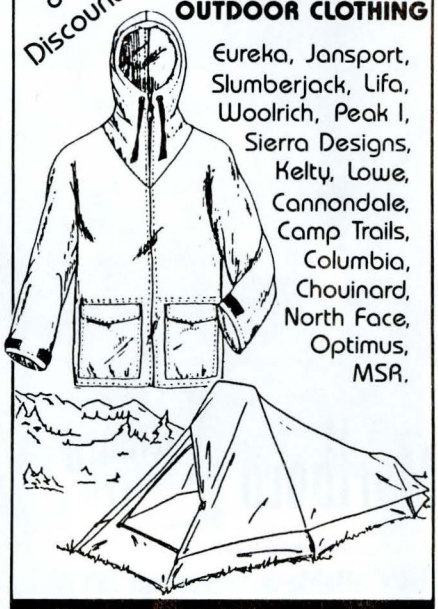
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two years of fieldwork along the Rio Madeira (a major Amazon tributary in western Brazil), has produced the first broad study of relations among fish and trees in the flooded forest. The featured players in Goulding's study are a group of fish known as the characins, a highly diversified and successful clan that numbers up to a thousand species in Amazon waters. Included among the seed-eating characins is a species called the tambaqui, one of the largest fish found in the Amazon and possibly the single most important source of protein for the region's human population. Also included are some of the piranhas.

Tambaqui are seed predators of huge appetite. They migrate into the flooded forest and gather in crowds beneath their favorite food-furnishing species, the rubber tree *Hevea spruceana*. Like most tree species in the Amazon, the *H. spruceana* grows not as clusters or groves but as widely separated individuals, surrounded by other tree species; consequently, a whole gang of tambaqui may simultaneously address themselves to a single *spruceana* tree. They could conceivably eat every seed that it drops.

To crush the hard nut-walls of those seeds, tambaqui have evolved large jaws and strong, broad, molarlike teeth. They crunch up the *spruceana* seeds (which are about as tough as brazil nuts) and swallow the nut shells as well as the seed tissue—though only the seed tissue gives them any nutrition. A single gorged tambaqui, weighing 30 pounds, might carry two pounds of ground-up seeds in its stomach. That's like you or I tucking away 12 pounds of peanuts, shells and all, in the course of an afternoon ball game.

The seed-eating piranhas are a bit more fastidious, and it seems to be precisely those pointed, razor-edge teeth that make such fastidiousness possible.

Even the most notorious flesh-eating piranhas—for instance, that large species commonly known as the black piranha—evidently move up into the flooded forest on a seasonal search for better supplies of food. In the igapó, these flesh-eaters continue to function as secondary consumers, preying on other fish, insects, occasionally a bird or mammal, or any other animal that might inhabit the forest waters or be so unlucky as to fall in. Black piranha do seem to be omnivorous rather than strictly carnivorous, opportunistic enough to make seeds and fruit a small fraction of their diet when those foods are easily available. But the piranhas that specialize in seed-eating, though closely related, are distinct.

Michael Goulding has identified at least two species of piranha—*Serrasalmus serrulatus* and *S. striolatus*—that live mainly on a diet of seeds. Each of these species retains jaw and tooth structures almost identical to those seen in its infamous, flesh-eating cousins. *Serrulatus* and *striolatus* merely put those structures to different use. According to Goulding: "Piranhas shell the nuts they eat and ingest only the soft seed contents. . . . After the nut wall is broken, the endosperm contents are removed and the shell is discarded. By doing this the piranha does not fill its stomach and intestines with material that cannot be digested but that will take up space. The sharp teeth of piranhas allow them to masticate the soft seed contents into small bits that are usually of nearly equal size." By slicing through the nut wall and rejecting it, eating only the seed tissue itself (and ignoring also the fleshy fruits in which some igapó trees wrap their seeds), the piranha maximizes the nuts' nutritional benefit from each bellyload of food. It is a delicacy of appetite that, during the lean times when no seeds are falling and when the fish must live off stored fat, could make the difference for survival.

TAKE AWAY THOSE FLOODPLAIN TREES, though, and survival becomes far more problematic.

Timbering, slash-and-burn agriculture, clearing away floodplain forests with the notion of pasturing cattle or planting rice or developing projects like the one at Lago Agrio—all these represent attacks not only on the lowland tree communities but also on the fish species that feed among them. And by Goulding's estimate, those seed- and fruit-eating species account for something like 75 percent of all the fish sold at markets in Manaus and other cities of the central Amazon. Since fish is the main source of animal protein for the human population, this whole chain of interdependence is crucial by any standard.

Remove the trees, and you can expect the fish to disappear. (Kill off the fish by any other means, and in turn some of those tree species—the ones that depend on fish for dispersing their seeds—may not survive.) Contrary to common misperception, the soils throughout much of Amazonia are very poor, and the rivers draining those soils are therefore also infertile. So the fish that spend half their lives in those rivers depend utterly on the manna that falls in the forest, and on the floods that carry them to it.

It's just another vivid demonstration of what we already know. The great jungle ecosystems of Amazonia are not a *symptom* of the region's richness. They *are* that richness. Wreck them, and you wreck everything. ◻

# Parks Reece, Wildlife Artist

## *With apologies to the duck people*

By Tim Cahill

About two years ago, Parks Reece, the artist, was drinking beer and showing friends some slides of his trip to Guatemala. He had bought scads of Mayan art for display and sale in the Danforth, an art gallery in Livingston, Montana, and he had taken a lot of photos of smiling, handsome people high in the mountains, shots taken from his hip or under his arm. Mayan folk believe a soul may be stolen when a photo is taken. No harm is done, of course, if the subject is unaware that a picture is being snapped, so Reece would position the camera under his arm, cough, and click off a shot.

Other underarm photos showed men in uniform carrying automatic weapons, guys who didn't care to have their pictures taken either, and who might steal a cameraman's soul for the cost of a bullet. There were photos of marketplaces, colorful Mayan textiles, temples in the jungle, and people's feet. Lots of feet.

"Hah hee-uls," Reece said. The two words, translated from his native North Carolinian, mean "high heels." Reece had taken several pictures of a French woman, who he shot from the knees down because she had worn high heels out to the spongy jungle and rubble of an ancient Mayan temple.

There were more feet. Reece had dangled one of his own over the top of a Mayan pyramid so all you could see was a tennis shoe, enormous in the foreground, with the temple steps dropping away like the face of a cliff. Reece takes photos of his own feet "for perspective."

What is remarkable about the slides and the Mayan art is that they made it back to Montana at all, since the whole shooting match had been stolen in Mexico. As I piece together this story, Reece had drifted up the Mexican Caribbean to the island of Isla Mujeres, where he managed to acquire a second-degree sunburn. Naturally, he didn't have near enough cash to rent an air-conditioned suite, so Reece was lying in his room, atop the starched sheets, dreaming of agony by fire. The door was open slightly to provide the semblance of a breeze, and at about 5:30 that morning, just as the tropical sun thundered up over the Caribbean, Reece became aware of a rustling nearby. There was a man there, and he was in full exit, camera and film in hand. The film! The foot photos! Reece realized that he was losing his perspective, and he took off in pursuit.

As it turned out, the man had made several trips to the room and had been stashing Reece's goods in a car parked below, a car he'd stolen. Reece didn't know that. He only knew that this guy was running away with his feet.

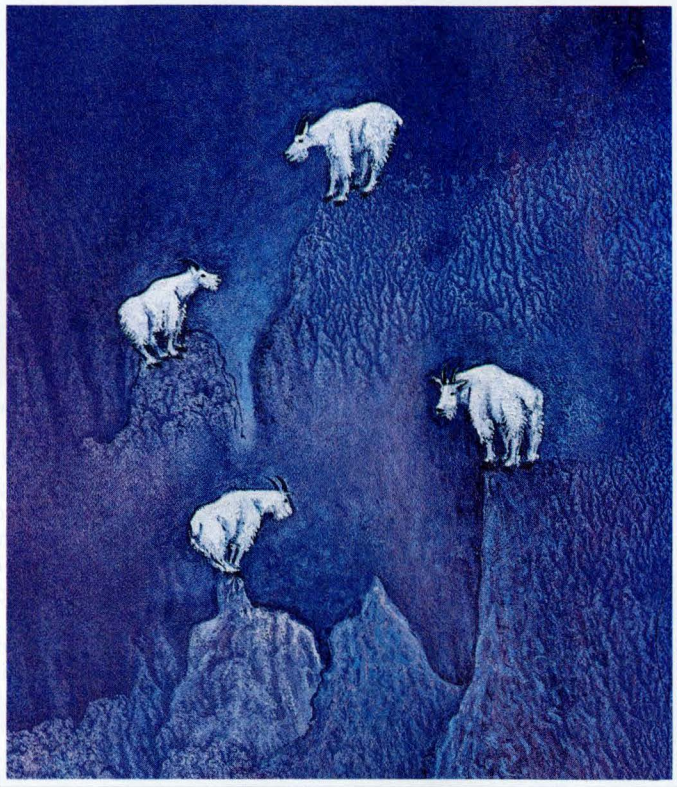
Reece was barefoot, wearing only shorts. The thief, as he ran, must have wondered what sort of creature was chasing him: a semi-naked man, red as a boiled lobster, howling after him in a Spanish more atrocious and grating than any he'd ever heard. Twenty minutes of full-tilt running. Twenty-five. The gringo, like some burning angel of vengeance, wouldn't give up. And now there were sirens and a sense of police not far behind.

The thief ran for another ten minutes and found himself in a graveyard, trying to duck behind the headstones, but the Gringo of Fire was close behind and there was mortal danger, here in the place of the dead. A wall before him now, and the thief leapt, failed to catch the top, and crumpled in surrender.

Police arrived, the man was arrested, and Reece, after signing the proper forms, regained the Danforth's art and his own Desenex perspective. The Mexican police stood in line to shake his hand. The man he'd captured was a very bad hombre—*muy malo*—wanted for many crimes. No one understood why it was that, once cornered, this bad man chose not to fight Parks Reece.

I think I know why. The thief had stolen art from Parks Reece, sneaking off into the night with a man's soul. Cornered there in the graveyard, he must have looked into the nearly naked gringo's crimson face and seen the eye of the tornado.

OK, NOW LOOK AT THIS PIECE OF ART wrought by the hand of Parks Reece: There's a deer staring out at the viewer, and beside it, standing huge in a forest glade, is this . . . well, it appears to be a 700-pound muskmelon. Both deer and



PARKS REECE/PHOTO BY KEITH SZAFRANSKI

*Accident in oil: Parks Reece's* Darling Billy, *which means no disrespect*

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melon are well rendered, acrylic on oil, in the style of representational Western art. The piece is titled: *A Chance Encounter.* Stare at the thing for a while. It's amusing and actually sort of pretty. Makes you smile. You wouldn't mind it hanging on your wall, this puzzled ungulate, this large...

Wait a minute. What we're looking at here is an antelope and a cantaloupe. The work, frame and all, costs $175.

There were two dozen more such paintings hanging in the Danforth Gallery the late summer day when Parks Reece's show opened. One depicted a grizzly sliding down a rope off the face of a cliff and was titled *Bear Rappellent.* Another is concerned with the quality of light in the northern Rockies, a moody rendering of that last flash of subdued brilliance after the sun sets and before darkness settles over the land. Positioned in the midst of this wondrous, fading glory is the silhouette of a man. The painting is titled, *Where Angels Leer at Fred.*

The question asks itself: Is this "Ott" widda capital "A"? What sort of man approaches the most important aspect of his life with a giggle?

PARKS REECE GREW UP IN NORTH CAROLINA working with finger paints. His mother exhibited her finger paintings in New York when such work was considered experimental. From second grade to eighth grade Reece got to "skip a lot of classes" by drawing posters for various school projects. He then got caught up in "a militaristic football dynasty."

He studied art for two years at East Carolina University, then went to the *Universidad National* in Costa Rica to learn about Pan American art. It was a course of independent study that might have been designed by Indiana Jones: laboring a beat-up four-wheel-drive vehicle through the Central American jungles to remote archeological sites, living with Indians who produce colorful textiles in the traditional manner. In six months of travel Reece was robbed six times—"half the time the robbers were soldiers" — until he took to sleeping under the vehicle with a machete at the ready.

Back in the states, he earned his bachelor's degree in fine arts from the prestigious San Francisco Art Institute and was about to enter the Merchant Marines when a fellow student invited him to work on a ranch in Big Horn, Wyoming.

In his off time the novice cowboy painted some murals for professional buildings in Sheridan, Wyoming, which led to a job in Lodge Grass, Montana, where Reece was hired to supervise the painting of murals at the local high



Photo: Tom Lippert



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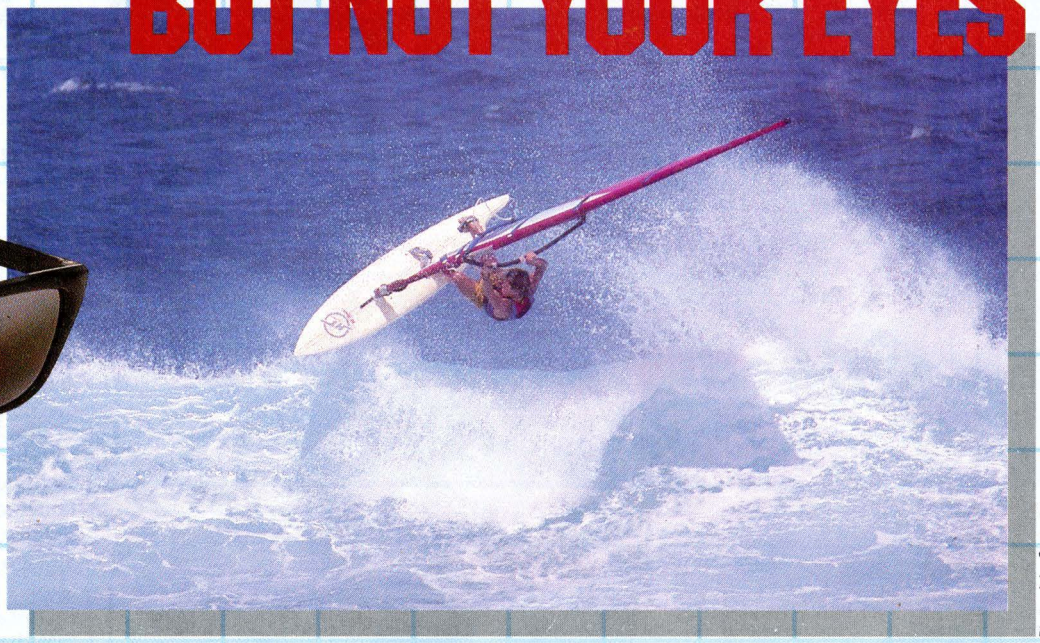


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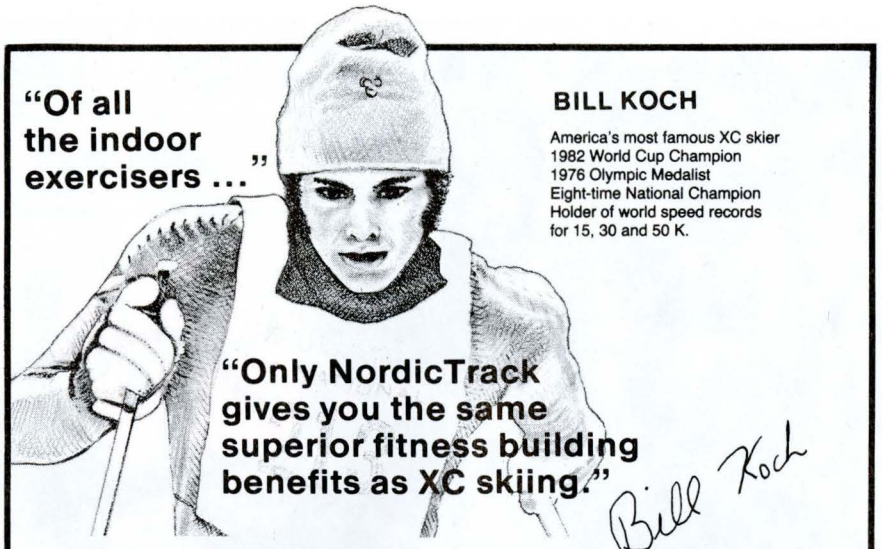
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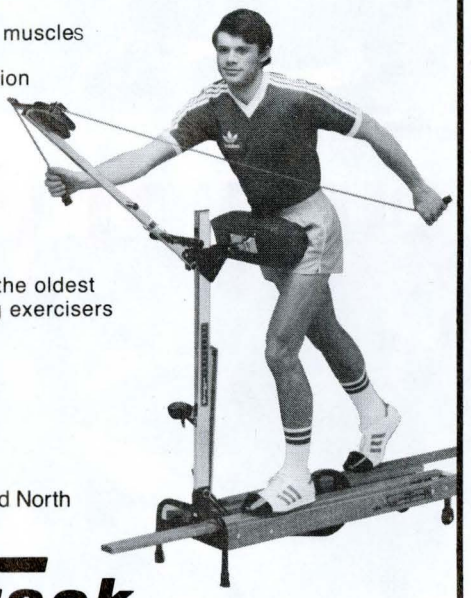
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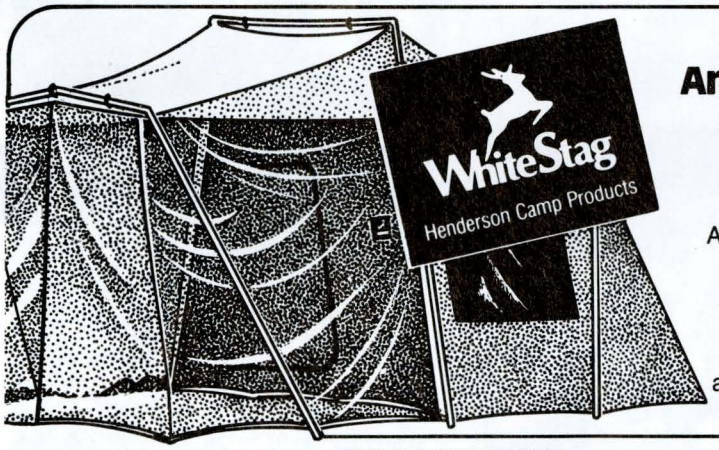
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school. "All these kids were Crow Indians," he recalled. We painted windows next to actual windows, with wolves standing there, looking into the school. The kids painted their visions."

Reece was offered a job teaching art at Lodge Grass, so he went to Montana State University to get his teaching credentials. He did his student teaching stint in North Wales, then cycled around France and Italy, visiting museums, sleeping in farmers' barns, and meeting people.

When he returned to Montana, the man who had offered him the teaching job had quit, and no one at Lodge Grass wanted to hire Reece. He settled instead in Bozeman and did day labor, specializing in "sorting metal in junkyards and pouring concrete." The art he created back in 1979 took two forms: abstract prints—"I like working with form and color"—and small, fanciful, "semi-realistic" paintings. One of the latter is of a gorilla, impeccably rendered, staring at its upthrust index finger upon which a small bird is perched. The bird is, quite clearly, in Reece's words, "cussing the

*"IT WAS PRETTY ONE-SIDED AS TO WHAT WE SOLD," SAID REECE. "DUCKS DID WELL."*

gorilla out." The ape appears downcast.

Late that year Reece moved to Gardiner, Montana, at the entrance to Yellowstone Park, where he spent his time hunting and fishing, hiking in the mountains, and starving to death. When a job opened up at the Danforth Gallery in nearby Livingston, Reece "reluctantly" jumped at it. A few months later he became the director of the nonprofit gallery.

For four years Parks Reece booked shows at the Danforth. "I tried to bring in the best of each genre," Reece said. "We had super-realistic Western art and wildly abstract art in the same show. There were some sophisticated collectors, but most of the local people hated the abstract stuff. They had a good sense of who was good in Western art, and I admire some of those artists myself. But it was pretty one-sided as to what we sold: always horses and mountain men and ducks. Ducks did well."

In 1984 Reece asked the Danforth board for a year off to pursue his own art, and in 1985 the board elected to turn

the Danforth building into an educational facility. There would be pottery classes, dance and drawing and painting classes. Reece and five other artists would be exhibiting their work in the Danforth's last show.

As the show approached Reece wondered whether he ought to display his prints, the abstract works concerned with form and color: Would people like them or would they prefer his fanciful realistic paintings? One night he had just finished running off some prints and was cleaning the ink off the marble slab used for printmaking. He poured turpentine on the slab as usual, but instead of using a rag to mop up, he laid down a sheet of paper. The accidental design on the cleanup print caught his eye. He found that if he thinned the turpentine, he could create unusual effects. It was like working with finger paints as a kid. "You just messed stuff around until it looked like a cliff," said Reece. "It had that perspective, and there were areas that looked like trees and flowers. The more I looked at it, the more I wanted to see something hanging over that cliff." Using "a tiny brush," he painted in the figure of a grizzly bear rappelling off the side of the abstract cliff.

The acrylic images on the accidental oil-based backgrounds are, for the most part, a parody of the wildlife art that sold so well at the Danforth. Reece meant no disrespect, but he supposed the duck people would be offended and the collectors would find him frivolous.

WHAT HAPPENED IS THIS: OTT WAS NOT allowed into the gallery. Ott is a German shepherd that belongs to Parks Reece.

The publishers of a highly funded new travel magazine — who just happened to be passing through town the night the show opened — bought three paintings and offered Reece a tentative job traveling and painting for the publication.

The novelist and screenwriter, William Hjortsberg, reviewing the show, said Reece's "detailed miniatures have all the technical facility and design savvy of a trained and serious artist ... Not since the work of the great English illustrators—Hogarth, Cruikshank, Thomas Rowlandsan — can I remember seeing such a happy combination of artistic ability and humor."

Gallery patrons—collectors and duck people alike—bought enough paintings to break the Danforth's one-night selling record. Folks seemed to think that Parks Reece was a funny guy who just happened to be entirely serious about his art.

There's a thief in a Mexican jail who knew that two years ago. ◻






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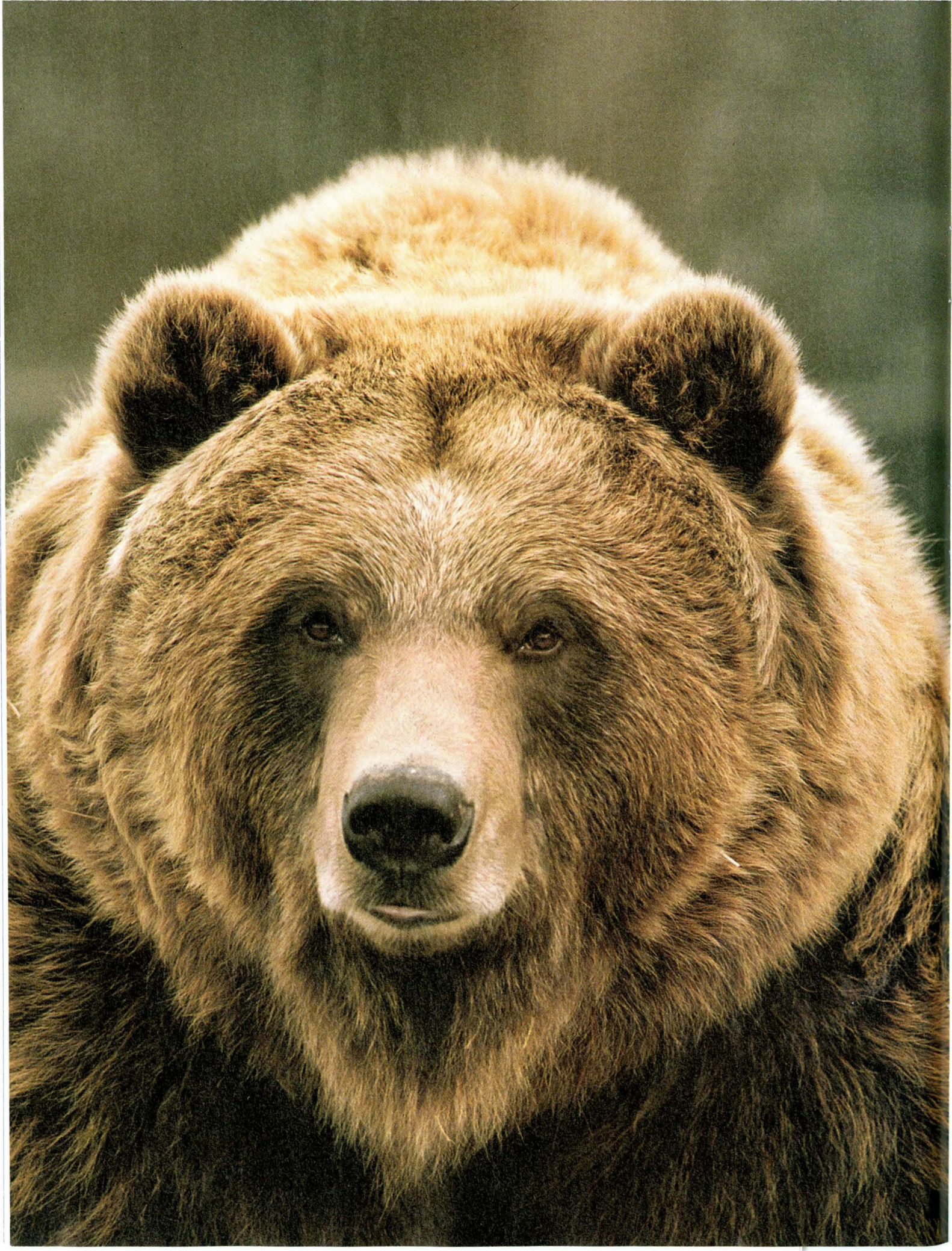
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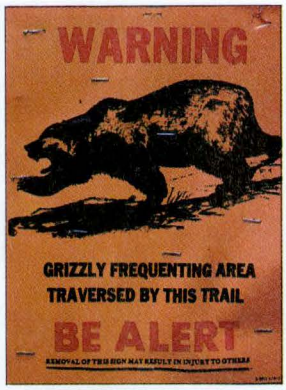
CIRCLE NO. 183 FOR READER SERVICE



# THE GRIZZLY AND THE JUGGERNAUT

## HOW ENLIGHTENED ENVIRONMENTAL THEORY HAS DESTROYED THE GREAT BEARS OF YELLOWSTONE

By Alston Chase




JEFF FOOTT/BRUCE COLEMAN

*Remnants: With the Yellowstone grizzly slipping toward extermination, warning posters like the one above are reminders of a time when bears lived, not died, in the park.*

During the spring of 1984 a sow grizzly and her three cubs walked across the ice of Yellowstone Lake to Frank Island, two miles from shore, in search of food. While on the island, their ice bridge melted, and the bears were stranded. After subsisting for a while on fish remains, small rodents, vegetation, an elk carcass, and ants, they began to starve.

Rangers spotted the four bears, but authorities decided against a rescue. They had decided, according to a later report, "to let the situation develop naturally."

Naturally, the bears were dying. By June, emaciated, the sow, which should have weighed at least 250 pounds, was down to 150. Her cubs, normally 35 to 40 pounds, had less weight to lose. Two weighed only 20 pounds and one only ten. Finally, in late June, park authorities decided to move the bears to the mainland. But for the smallest cub it was too late. Weakened by starvation, it died during transport after being shot with tranquilizer: one more unnecessary death in a generation of bears that may be among Yellowstone's last.

During the last three years perhaps more has been done for the grizzlies of Yellowstone than for any wildlife species in history. The federal government in 1984 spent $2.7 million on Yellowstone grizzly management—more than $13,500 per bear. The departments of Agriculture and Interior give grizzly preservation top priority. A dedicated group of scientists—the Interagency Grizzly Bear Study Team—closely monitors the grizzly's condition. Dozens of government personnel from five national forests, the Fish and Wildlife Service, and the National Park Service work full time on grizzly protection. Influential environmental organizations have dedicated themselves to the bear's survival. The media have given the animal enormous attention.

Yet the bears are dying.

While authorities estimate the Yellowstone grizzly population to be about 200, only about 50 of them are adult, reproducing females, and about

STEPHEN J. KRASEMANN/ALASKAPHOTO

three of these bears are lost a year. In an April 1985 article in the prestigious scientific journal, *Ecology*, Dr. Richard Knight, leader of the IGBST, and Dr. Lee L. Eberhardt, a mathematician with the Batelle Laboratories, reported that extinction of the Yellowstone grizzly is indeed now a possibility. "There are," they observed, "... various grounds to believe that the population may be declining, and good evidence that the number of adult breeding females is small. The prospect of extirpation thus has to be considered."

Why, despite this enormous effort, is the grizzly disappearing? The answer lies, we are told, with events beyond the government's control. Human activities in and around Yellowstone are to blame for the grizzly's problems. "The grizzly faces the poacher's rifle, habitat-eating oil and gas exploration, livestock grazing, timbering, and human recreation needs," wrote Amos Eno, legislative director of the Audubon Society, in 1983. "If we are to save the grizzly, we must act quickly and intelligently."

But in fact, the bears are dying because the government, as a matter of policy, is killing them. In pursuit of that policy, during the last 17 years scientific research on several occasions has been curtailed, careers have been derailed, information has been manipulated and withheld. And, of course, bears have been killed—more than 325 by various causes since the program began. And according to a recent report by the Wildlife Committee of the National Parks Advisory Board, during the last four years "the highest number of grizzly deaths were from 'controlled action' and 'research accidents' by agency managers and researchers."

Paradoxically, the government's policy, known as ecosystems management, is not ecological at all. With the attractive goal of restoring Yellowstone to the conditions it enjoyed before the first white man set foot there, ecosystems management has enchanted both bureaucrats and environmentalists. But it has been preached more than practiced. Based on assumptions that were never examined, this policy has been run not by scientists dedicated to saving the grizzly, but by managers interested in saving the reputation of the government. Crucial studies have never been done, and bears continue to suffer because of this ignorance.

This tragic course of events could, very possibly, be reversed tomorrow, if there were the bureaucratic will to do so. But if history is any guide, that almost certainly will not happen. Seventeen years after its introduction, government grizzly policy still enjoys the support of the federal bureaucracy and many environmental groups. Neither wants to admit that they have been mistaken and are bringing about the extinction of a threatened species. And while the trendy slogan of "ecosystems management" continues to hold many under its sway, the plight of the grizzly is serving a variety of hidden political agendas. Taken together, these disparate forces may soon bring about a Yellowstone without bears.

## PART I
# THE BEAR PROBLEM

When Lewis and Clark poled up the Missouri River in 1805, they encountered large numbers of grizzlies along the valley bottoms, feeding on buffalo that had been drowned in the river or driven off of cliffs by Indians. By the time Yellowstone Park was created in 1872, however, grizzlies had been chased off the plains, and settlers had taken over their habitat along the major water courses, eliminating the buffalo and much of the bears' access to spawning trout and salmon. The grizzly had retreated to the high



JOHN AND FRANK CRAIGHEAD

***Killing curiosity:** An adult male grizzly investigates a culvert trap at Trout Creek during the heyday of bear research in the late 1960s.*

mountain plateau that eventually became the nation's first national park.

But in Yellowstone the white man, having destroyed the bear's original ecosystem, replaced it with another. Park visitors fed the bears and produced garbage, which these opportunistic scavengers consumed.

"The effect of protection upon bear life in the Yellowstone," wrote an enthusiastic Theodore Roosevelt upon visiting the park in 1903,

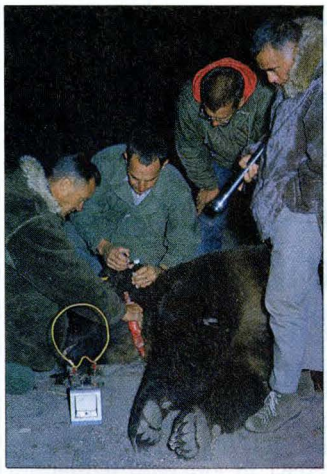
> has been one of the phenomena of natural history. Not only have they grown to realize that they are safe, but, being natural scavengers and foul feeders, they have come to recognize the garbage heaps of the hotels as their special sources of food supply. They have now taken their place among the recognized sights of the Park....

When the Park Service was created in 1916, the new bureaucracy featured bears as a major attraction. Bleachers were set up around the garbage dumps, so that visitors could watch the grizzlies feed as they listened to ranger-naturalists explain the bears' behavior. As park visitation increased, so did garbage, and the bear population multiplied. Based on censuses taken at the dumps, the number of grizzlies increased from 40 in 1920 to 260 in 1930. Sometimes as many as a hundred grizzlies could be seen at the Rabbit Creek dump, near Old Faithful. Yet, as appealing as they were to park visitors, the bears were a headache for rangers, regularly injuring people and damaging property. Often these "bear incidents" resulted in tort claims against the park.

This was the "bear problem," as the rangers called it, but it might have more accurately been described as the "black bear problem." For it was the black bear—*Ursus americanus*, the impish, appealing, but destructive and sometimes dangerous clown who prowled the campgrounds and begged along the roads—that was of particular concern to park managers. Few visitors ever saw his larger, more fearsome cousin, the grizzly—*Ursus arctos*, or silvertip. Much larger than the black, weighing as much as 1,200 pounds, this bear, identified by its broad muzzle and long, gray hairs, usually stayed in the backcountry away from human beings. Between 1959 and 1965 black bears were involved in nearly 300 cases of personal injury and about 1,700 cases of property damage. During the same period grizzlies accounted for only 17 injuries to humans and 39 cases of property damage. Yet the grizzlies got the headlines. Although few, their encounters with humans were dramatic. Unlike blacks, they occasionally—but only very rarely—killed people.

Throughout the fifties and sixties, concern for the bear problem continued to mount. Even though the last fatal mauling had occurred in 1942, and—thanks to increased efforts to teach visitors the dangers these animals posed—bear incidents were in decline, Park Service personnel worried that their luck wouldn't hold. And as visitation passed the two million mark for the first time in 1965 and was projected to continue to rise, park managers feared that the risk of encounters between bears and people was increasing. Yellowstone's bear problem, it seemed, could only get worse.

In July 1967, at the request of the Park Service, biologists John and Frank Craighead submitted a population report on the Yellowstone grizzly. According to their census taken at the dumps, between 1959 and 1966 the number of grizzlies had increased from 154 to 202—or an average of six bears per year. This was not accepted as good news. For, a month later, two young women, in separate incidents, were fatally mauled by grizzlies in Glacier Park on the same day. Suddenly the situation seemed urgent. Park officials had to find a way to control both the black bear and the grizzly. By the spring of 1968 they had come up with a solution. Basing it on the new science of ecology, they thought it would be not only good management but also good science.



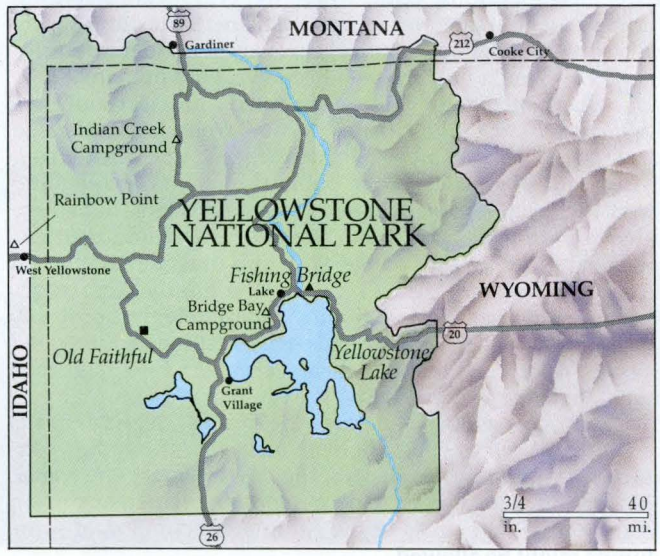
JOHN AND FRANK CRAIGHEAD

*John Craighead (left) and other researchers collaring a grizzly*

**UNKNOWINGLY, THE CRAIGHEADS HAD VIOLATED A CARDINAL BUREAUCRATIC RULE: NEVER CHALLENGE THE CHAIN OF COMMAND.**

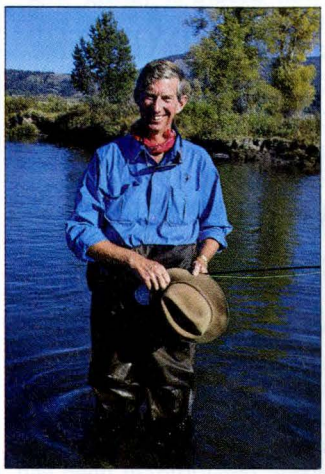
A reflection of growing environmental consciousness, the goal of ecosystems management was, in the words of Park Service Deputy Chief Scientist Robert Linn, "to maintain, or re-create when necessary, ... those ecological conditions that would currently prevail were it not for the advent of post-Columbian man and his cultural impact." Natural areas should be preserved as primitive, self-regulating ecosystems. Wildlife populations should be regulated by natural biological forces, not by the manipulations of managers.

Permitting wild animals to rummage among broken ketchup bottles and discarded pizza crusts hardly seemed, to wildlife managers in 1968, an example of enlightened wildlife management. Garbage, they believed, had no place in a natural ecosystem. Now, thanks to the Craighead report, there was evidence that garbage might sustain an artificially high number of grizzlies. To scientifically manage these animals required weaning them from garbage so that, rather than being




DON KLAPPAUF

*Battlegrounds: sites of grizzly incidents in and around Yellowstone*



*Nathaniel Reed*

**"SECRETARY REED AND THE NATIONAL PARK SERVICE HAVE DONE EVERYTHING TO SILENCE THOSE WHO DISAGREE WITH THEIR MANAGEMENT OF GRIZZLY BEARS."**

concentrated around the dumps and campgrounds, they would be dispersed throughout the park; and rather than the bear population continuing to grow, it would stabilize at the "natural carrying capacity" of the range.

The Park Service, wrote Robert Linn to the Craigheads' superior in the spring of 1968, should not "manage the resources to augment the grizzly population.... Why should there be continued growth of a population? This would only lead to overpopulation. Again, the objective is to maintain or restore natural ecosystem relationships."

Unfortunately, no one knew what these "natural ecosystem relationships" were. No one knew how many grizzlies had lived in Yellowstone in primeval times, nor how far they had once roamed in search of food. The natural carrying capacity of Yellowstone—if any—had never been determined.

The Craigheads were quick to point out that the plan to close the dumps was fraught with difficulties. Grizzlies had been feeding at dumps in Yellowstone since the late 1800s, and the Craigheads were unable to detect any adverse biological effects from this habit. The dumps were now located in remote centers of the park, where the bears were safe from humans and humans were safe from them. If the dumps were ever to be closed, however, the bears would wander to look for food. This would bring them into contact with humans.

"The result," the Craigheads warned, "most certainly will be increased grizzly incidents in campgrounds, accelerated dispersal of bears to areas outside the park, and greater concentrations of grizzlies at the public dumps in Gardiner and West Yellowstone, where food will still be available but where adequate protection will not. The net result could be tragic personal injury, costly damages, and a drastic reduction in number of grizzlies." And reducing the grizzly population, the brothers noted, was not only undesirable, but probably illegal. Since 1967 the grizzly had been listed as an endangered species. By law this required the government, the Craigheads noted, to take steps to increase the number of bears.

Instead of a quick closure of the dumps, the Craigheads suggested a controlled, gradual closing, with studies conducted to monitor the effect on the bears. During the transition period, and longer if necessary, supplemental carrion feeding in remote areas or the continued operation of some dumps might be allowed.

Such an approach, however, was not the quick fix the Park Service wanted. Park managers were undisturbed by the prospect of fewer "garbage bears." Though the Craigheads believed that the bears they counted near the dumps represented 75 percent of the total number of grizzlies, authorities insisted that there were many more bears, scattered throughout the park, than the Craigheads had found—perhaps 350 in all. Killing "spoiled" garbage bears would only make more room for this hypothetical "backcountry population." There was little evidence to back up the estimate—indeed, little that a backcountry population existed. But what had started as a scientific difference of opinion evolved into a political battle. Unknowingly, the Craigheads violated a cardinal bureaucratic rule: Never challenge the chain of command.

"When scientists attempt to extend their products of research into the realm of policy and management decision making," wrote Deputy Assistant Secretary of the Interior Curtis Bohlen to Senator Robert P. Griffin later, "this goes beyond the normal prerogatives of a scientific endeavor."

Thus the Park Service began to wean the bears from garbage, hoping to transform them into a "wild, free-ranging population." In May 1968 they started to phase out the dumps, to "bear-proof" waste containers, to increase efforts to educate visitors about sanitation and the danger of bears, and to remove all "nuisance" bears. This program also ultimately required killing bears that refused to be "weaned" of garbage, and in March 1969 the Interior Department removed the grizzly from the endangered list, thus sanctioning future killing.

SENATOR JOHN TURNER

As dumps were closed the grizzlies began to wander. More came into campgrounds; more people were injured. Cut off from their usual food, the grizzly now became, for the first time, a real danger to visitors. According to logs kept by district rangers in the Fishing Bridge area, there was a dramatic change in bear activity. During the summer of 1967 black bears had accounted for 25 of the 31 entries in which the species was identified. By 1968, immediately after the food at nearby Trout Creek food dump had been reduced, 78 of 91 such entries involved grizzlies.

By 1971 all the dumps had been closed, and the next June, near Old Faithful, a grizzly fatally mauled a camper named Harry Walker, the first such fatality in Yellowstone in 30 years. As the Craigheads had predicted, the new management was turning the silvertip into a menace.

In response the park began to kill more bears. The number of "control actions," according to a National Academy of Sciences report, rose from an average of 13 per year before 1968 to 63.3 per year between 1968 and 1970. The number of grizzlies reported killed by control actions, according to NAS figures, rose from an average of three per year before 1967 to nine per year between 1968 and 1970. The annual man-caused bear mortalities rose from an average of 18.9 to 31.5. Between 1970 and 1971 alone, 101 bears, according to the NAS, were "removed" from the Yellowstone population. In all, according to the NAS, 189 grizzlies were reported killed between 1968 and 1973.

So how many bears did this leave? No one knew. But John Craighead warned Yellowstone authorities that, if trends continued, the population would eventually disappear. "The death rate," he reported in 1972, "... has been more than double the birth rate. Our conclusion is that this population is in very serious trouble...."

Meanwhile, the surviving bears, no longer attracted to the dumps, were leaving the park—or in some cases were carried, tranquilized, to the boundary by rangers—where they were often dispatched by state game wardens as nuisance bears or shot by hunters and poachers.

In May 1971 President Nixon appointed Nathaniel Reed, then 38, as the new assistant secretary of the Interior for Fish, Wildlife, and Parks. Reed, scion of a prominent Connecticut family and benefactor of many conservation groups, endorsed and soon began to take the lead on official Yellowstone bear policy. The same year, the Craigheads' research permit came up for renewal. The park agreed to renew it only if the two promised not to speak to the public or publish without first obtaining Park Service permission. The Craigheads, seeing this as an infringement of academic freedom and even the First Amendment, refused. Their 12-year-old study came to an end.

Immediately after the Craigheads' departure, the Park Service began to remove the collars from bears the brothers had studied. With the collars gone, no further information on the bears' movements and population dynamics was available. Yet authorities showed little interest in further research. "Additional research on bears in Yellowstone," Yellowstone Supervisory Research Biologist Glen Cole wrote to Linn in 1972, "is of lower priority than having adequate funds and men to carry out the present grizzly management program." That management policy, of course, was decimating the grizzly population. And it was about to enter a new and more pervasive phase.

By the early 1970s a pattern had developed: To keep bears from garbage, authorities would "sanitize" a community by closing its dump. The bears would then disperse, boldly invading campgrounds and other towns, where — declared to be problems — they would be removed. Such removals were now a principal source of bear mortality. As grizzly attacks and incidents mounted, however, environmental groups and the media took notice. By the mid-1970s the new grizzly bear policy in Yellowstone had become a public controversy.

"The bear management program in Yellowstone," wrote Lewis Regenstein of the Fund for Animals in 1973, "is an extermination campaign designed in part to make the Park 'safe' for campers."

"As of this writing, nearly half of the Yellowstone grizzlies have been wiped out," wrote Steven Seater, a biologist for Defenders of Wildlife, to *The Wall Street Journal* in February 1974. The government was, contrary to law, conducting secret meetings on grizzly management and had failed to file an environmental impact statement regarding its grizzly policy, he noted. "It is sad, but unfortunately true, that the National Park Service (NPS) and the Assistant Secretary of the Interior, Nathaniel P. Reed, are guilty of numerous violations of federal law and regulations in their frantic attempts to conceal the truth about the program in Yellowstone."

Seater paid a price for his outspokenness. Shortly afterward the Defenders fired him—according to Seater—because of pressure from Reed. "Secretary Reed and NPS have done everything in their power to silence those who disagree with their management of grizzly bears," he wrote in *The Wall Street Journal* letter. "In my case, Mr. Reed lobbied one or more influential directors of Defenders of Wildlife to 'quiet me down.' . . . He ultimately prevailed and I was fired without so much as a day's notice."*

The firing of Seater, however, did not quiet things down. He was promptly hired by the Fund for Animals, where,

*Reed denies Seater's charges, insisting to this writer, "I had never even heard of the man," at the time he was accused of having Seater fired. Yet on June 1, 1973, Reed had written Seater a seven-page letter concerning Yellowstone grizzly management, and on August 14, shortly before Seater's abrupt departure from Defenders, Reed had written a letter to Lewis Regenstein, sharply criticizing Seater for an article the latter had written on NPS bear management. Calling Seater's account "unusually biased," Reed added, "we would like to express our surprise and regret that Mr. Seater's purported facts were not more thoroughly checked before printing."



JAY SUMNER

***Rainbow's end: The closing of the Trout Creek dump drove Yellowstone bears into nearby campgrounds, where they were quickly "removed."***

together with Regenstein, he continued in his role as gadfly of the government. Reacting to this continuing pressure, the Interior Department in 1973 created the Interagency Grizzly Bear Study Team composed of personnel from federal and nearby state agencies and directed by a Park Service employee, Dr. Richard Knight. The team in turn was supervised by the Interagency Grizzly Bear Steering Committee headquartered in Washington. Interior Secretary Rogers C. B. Morton also wrote Dr. Philip Handler, president of the National Academy of Sciences, requesting that the NAS conduct "an overview investigation of the events and scientific data" surrounding the controversy, and the academy created the Committee on the Yellowstone Grizzlies.

In 1974 the NAS committee issued its report: a virtually complete confirmation of the Craigheads' conclusions. It noted that the government's population estimates possessed "little if any meaning"; that the number of "unspoiled" backcountry bears had been exaggerated; that Park Service record-keeping of control actions and injury rates had been lax; that grizzly kills may have been higher than reported, and in any case too high; that by 1974 bear mortalities were averaging more than 30 per year; and that the population could not, over the long run, endure a man-caused annual mortality rate of greater than ten.

On only one major point did the committee fault the Craigheads. The brothers' population projections, the committee averred, had been in error because they did not account for the probable effect of "compensatory mechanisms." The Craighead model predicted the eventual extinction of the grizzly; this outcome, according to the committee, thanks to a miraculous biological device of population regulation, would not happen. Among its recommendations, the NAS committee urged "the creation of a nongovernmental coordinating body . . . directed toward the well-being of Yellowstone grizzlies. It must be chaired by a respected neutral individual." But doing this, wrote David A. Watts, assistant solicitor for Interior, in response, "would be an improper and unauthorized delegation of authority." In place of an independent effort, therefore, research was placed in the hands of the IGBST.



CHRISTOPHER CAUBLE

**"WHEN DICK KNIGHT TOLD ME, IN 1980, THAT IN FIVE YEARS HE HAD BEEN ABLE TO FIND ONLY 46 BEARS, I SUDDENLY REALIZED WE HAD BEEN HAD."**

*Richard Knight*

Like the Craigheads, however, Knight and his colleagues were not permitted to conduct serious research. It was made clear that the IGBST was to support management.

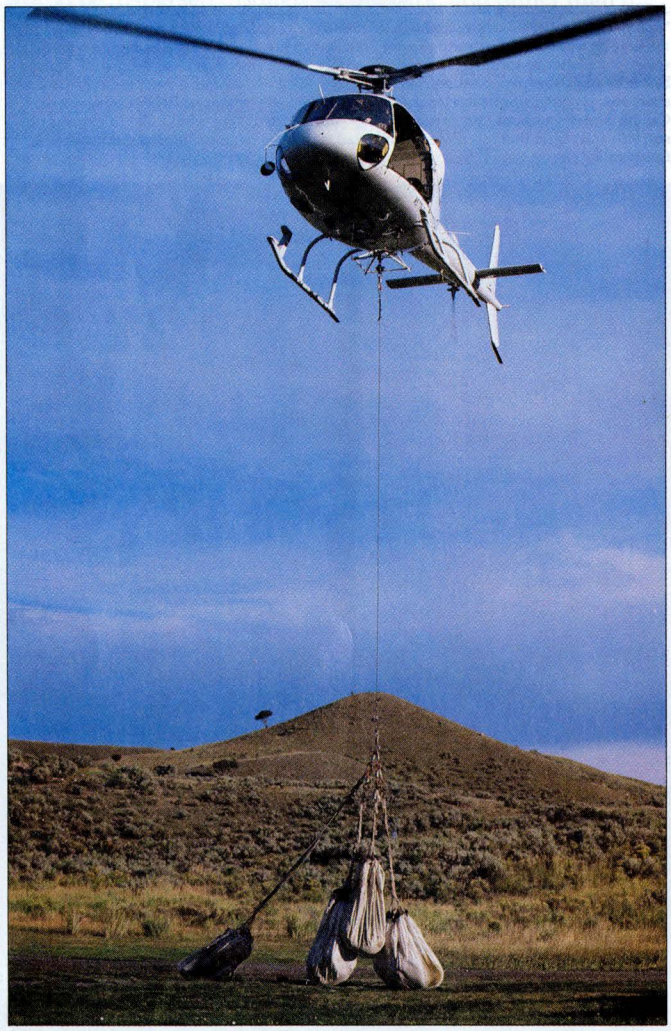
"I was involved in grizzly bear research 'planning,' from 1972 to 1974," wrote Robert B. Finley, now a researcher at the University of Colorado,

> when the Interagency Grizzly Bear Study Team was established by direction of Nathaniel Reed, then Assistant Secretary of Interior, supposedly for the purpose of obtaining factual data to resolve the disagreement. . . . It quickly became apparent that the team leader, Dick Knight, was expected to run the team in a way that gave support to the policies of Yellowstone National Park.

Meanwhile, the Fund for Animals carried on a campaign urging that the grizzly once again be declared endangered. Officials of the state of Montana, however, who wanted the hunting of the grizzly continued, objected to federal protection. So did Yellowstone authorities: "None of us believes that there is scientific evidence or facts indicating the grizzly is threatened with extinction . . ." wrote Superintendent Jack E. Anderson in March 1975. "Plainly it [the grizzly] does not need help in the Yellowstone area."

Nevertheless, a compromise was reached. In 1975 the bear was declared a "threatened species"—a lesser status than "endangered" — permitting the hunting of grizzly in Montana's Bob Marshall Wilderness (south of Glacier Park) while protecting the species in Yellowstone.

*Please turn to page 55*



CHRISTOPHER CAUBLE

***Problem bears:** Sow number ten and her three cubs are airlifted out of Yellowstone Park in 1983. The mother ended up in British Columbia, one of the cubs in a zoo. The last two were destroyed by authorities.*

# THE OUTSIDER OF THE YEAR AWARD 1985

Finding heroes is easy. Just ask people who they admire. Libby Riddles, the first woman to win the 1,200-mile Iditarod sled-dog race. Alan Rabinowitz, the wildlife researcher who helped establish the world's first jaguar preserve. Two brothers, ages six and eight, who survived being lost in the mountains in winter.

Last year we decided to sponsor an annual contest for the Outsider of the Year, an award we'd back up with a $5,000 prize. We were looking for "significant personal accomplishments" made between July 1, 1984, and June 30, 1985. The nominees would be judged on "the impact of their endeavor and the effort that went into its success." What we received in response challenged our concept of the exemplary outsider. Maybe we hadn't been thinking big enough.

We sent a short but strong list of candidates to a panel of accomplished and outspoken lovers of the outdoors. Jean-Michel Cousteau, executive vice-president of The Cousteau Society. Beverly Johnson, filmmaker and climber. George Schaller, research zoologist and director of Wildlife Conservation International at the New York Zoological Society. Doug Latimer, ultramarathoner and a board member of the Women's Sports Foundation. Stewart Udall, former secretary of the Interior. And Lawrence J. Burke, *Outside*'s publisher and editor-in-chief.

It should come as no surprise that the judges interpreted *outsider* in both senses of the word. They chose someone who, without question, had achieved something significant in the outdoors. They also chose an outsider, a loner, a man who negotiated human limits on his own terms. Steve Fonyo, an amputee, ran across Canada with as much defiance as grace. He ran whether people were scorning or cheering him, and they did both; neither response affected who he was or what he had to say. In the course of earning self-respect, he also earned a fortune for cancer research.

Besides Fonyo, the judges also selected four other outsiders, people who stand for something. Whether their quest was to revive a dying species or to rescue their own lives from lassitude, the individuals cited on the following pages pursued their dreams with passion. We welcome the inspiration.

THE OUTSIDER OF THE YEAR AWARD 1985

# Steve Fonyo's Journey for Life

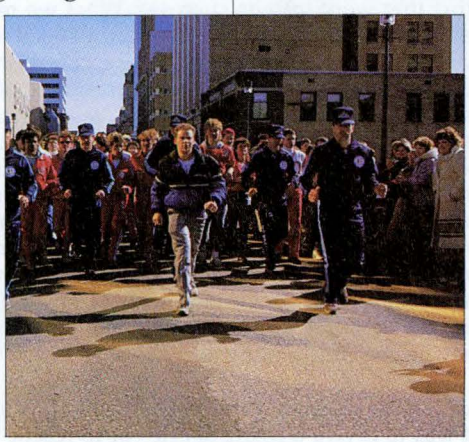
*By turning an offhand suggestion into a 4,500-mile, $11-million mission, Steve Fonyo proved something to a nation, and to himself. "I'm not a hero," he said. "I'm just a 19-year-old guy who got cancer."*

By David Roberts

The first sign that something was wrong was a slight pain just below the left knee. A sixth-grader living in Salmon Arm, British Columbia, Steve Fonyo liked to water-ski and to play football and baseball. The twinge in his leg felt like a playground bruise, but there was no discoloration of the skin. Fonyo ignored it.

A few weeks later a small lump appeared. The 12-year-old told his parents about it; they, too, dismissed the lump as a bruise. After another week, however, the pain was too strong to ignore. The family doctor took x-rays, then sent the boy to a Vancouver hospital for two days of tests, including a small biopsy. A week later Fonyo's parents entered his hospital room. His father gathered up his nerve and said, "Steve, I have something to tell you. You've got cancer, and your leg will have to come off."

Seven years later Fonyo recalls his reaction. "I started to laugh. I thought it was a joke. But my mother began crying, and that's when I realized it was serious business."



*A hero's welcome: Fonyo enters Regina, Saskatchewan (above); on the road outside Calgary (right).*

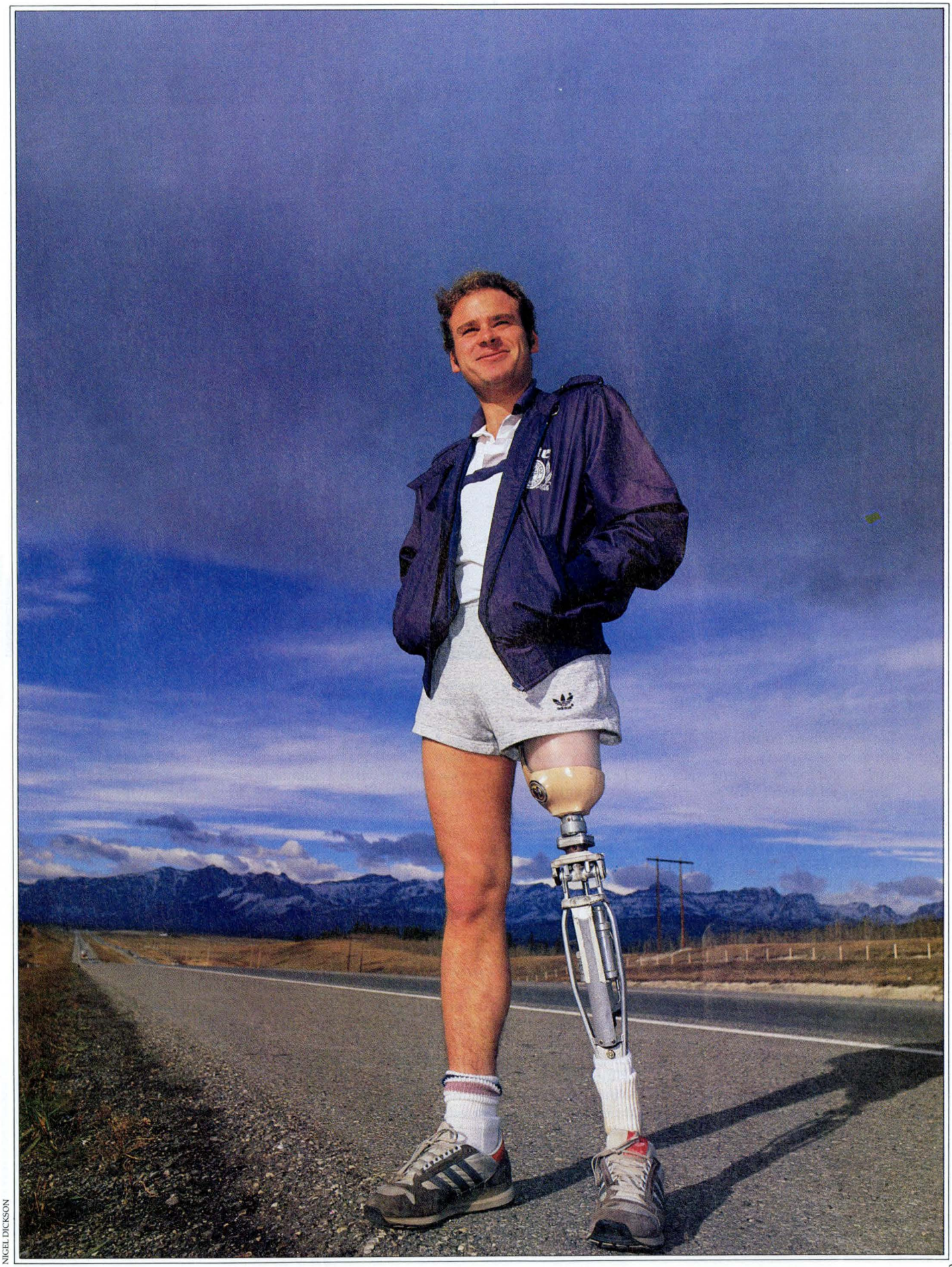
LORNE McCLINTON

The boy went home on a weekend pass. "I tried to forget about it," he says. "I went to see *Star Wars*. It was a frightening few days. Then I had to go back into the hospital." On February 9, 1978, Steve Fonyo's left leg was amputated above the knee. Though relatively rare, bone cancer usually strikes its victims — as with Fonyo — when they are young.

"When I woke up," he remembers, "I was numb. I couldn't feel anything. I didn't have the strength to sit up and look. So I moved my right foot to touch my left and all I felt was a cast. I couldn't believe my leg wasn't there. I passed out again."

Fonyo did not adjust well to his loss. His doctor, David Chan, remembers Steve as a "naughty patient. He would yell and scream and refuse his medicine." Says Fonyo's older sister, Suzanne: "I visited him a lot in the hospital. He was always moody and depressed." Fonyo railed at his nurses and sometimes hid under the bedclothes or threw his food on the floor.

One week each month for the next two years Fonyo re-



NIGEL DICKSON

turned to the hospital for chemotherapy. The high doses of Methotrexate administered intravenously took a cruel toll: Fonyo's hair fell out and he was nauseated for days at a time. After his tenth treatment, Fonyo relates, "I wanted to give up. You get tired of throwing up for a week. I'd had enough, so I walked out of the hospital. It took me two days to cool off. Finally, I realized if I didn't take the treatments, I'd die."

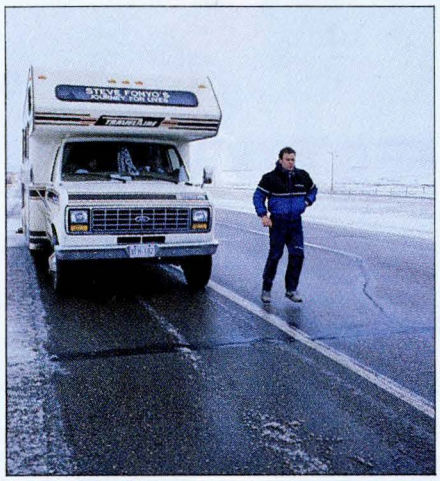
Fonyo had reached a personal nadir. It was an achievement of sorts even to arrive at a sullen willingness to go on with life. But no one who knew Fonyo at the time —not even his deeply loyal parents and sister—could have foreseen the transformation he would make from a resentful invalid to a Canadian hero and a worldwide symbol of perseverance and hope. Steve Fonyo himself could not have anticipated such an accomplishment.

He settled at first into an unambitious adolescence. His illness had set him back about two years, and he eventually would drop out of high school. Fascinated by things mechanical, at age 13 he had gotten a job repairing lawn mowers and chain saws; when he was 15 and still underage, he bought a used Dodge Charger and taught himself to drive. A police officer caught him and had the car impounded. At 16 Fonyo was arrested for drunken driving. Meanwhile, a fondness for junk food had turned him into a chubby teenager. His life included no athletic pursuits.

One day when Fonyo was 17, he was drinking at a party in Vancouver. A casual acquaintance there said to him, "Steve, why don't you run across Canada?" Two years earlier a young man named Terry Fox had galvanized the nation with his Marathon of Hope. Like Fonyo, Fox was a bone cancer victim who had had one leg amputated above the knee. He decided to run across Canada to raise money for cancer research. Fox began his journey in April 1980, reaching Thunder Bay, Ontario, near his projected halfway point, by September 1980. A recurrence of the disease, however, forced him to stop, and nine months later Fox was dead.

The offhand remark at the party stuck in Fonyo's mind. As a probationary sentence for his drunken driving charge he had been required to put in 200 hours of community service working with the mentally handicapped. The experience had tapped feelings of empathy within Fonyo that he hadn't known he possessed. During this period he was seeing Dr. David Chan every six months for a checkup. Says Fonyo: "The next time I went in, I mentioned running

**HE TRIED TO RUN HALF A MILE. "MY HEART WAS POUNDING. I SAID, 'NO WAY I'M GOING TO RUN ACROSS CANADA.'"**



*End in sight: With winter over and his journey two-thirds complete, Fonyo runs alone.*

LORNE McCLINTON

across Canada to Chan. I was hoping he'd say no. Instead he said, 'Good idea.' I came back in another six months, and he brought it up: 'When are you going to do it?'"

"I thought he was joking at first," Chan recalls. "But I thought that anything he could do to devote himself to curing others would help make his own life meaningful. I said, in effect, 'If you're serious, prove it to me. Start training now.'"

As a "gag," Fonyo says, he tried to run half a mile. "I dropped dead, my heart was pounding, and I said, 'No way I'm ever going to run across Canada.'" Nonetheless, he started lifting weights and bicycling on the roads near Vernon, British Columbia, where his parents — Hungarians who had left their country during the 1956 revolution — ran a restaurant. As Fonyo started running he cut back on the bicycling. After ten months he could run 20 miles in a day.

He approached the Vancouver chapter of the Canadian Cancer Society for support. According to Fonyo, "The woman there said, 'We can't do it. Terry Fox's family won't allow it.' She said she'd call the headquarters of the society in Toronto anyway. When I went back, she told me the national had said no way. I later found out she'd lied to me. The Toronto people never heard from her." Undaunted, Fonyo and his sister wrote letters to companies asking for support. After ten months they had raised $30,000 to meet his expenses.

To run across the country, Fonyo planned to follow the Trans-Canada Highway from St. John's, Newfoundland, to Victoria, British Columbia. On March 31, 1984, in a heavy snowstorm, he dipped his artificial leg into the Atlantic Ocean and began jogging along Newfoundland's Highway 1. A donated Winnebago served as a mobile base camp, though Fonyo slept each night in a hotel.

During his first hours on the road the 18-year-old was desperately homesick. He called Suzanne the first night and persuaded her to leave her young daughter and fly to St. John's to accompany him. The driver of the Winnebago was a 49-year-old man also hired to be Fonyo's medical aide. Relations between the two quickly soured, and the aide quit after six weeks, casting aspersions on the runner when he left. Throughout the rest of the journey either Suzanne or Steve's father rode in the Winnebago, offering constant moral and medical support.

Running with an artificial leg is an awkward business. To take a stride with the left leg, Fonyo must swing the metal prosthesis — a dead weight — with a rotary motion from his hip. This makes for a long, slow step. Once the left foot is planted, he must take *two* steps on his right foot, linking them with a little hop, to match the stride of his good leg. The motion looks jerky and stressful, and indeed, it makes great demands on his right leg.

Fonyo's journey seemed star-crossed from the start. Within weeks he had developed problems with the sleeve that attaches the prosthesis to his stump, and by June, the jolting to his right leg had given Fonyo severe shin splints. Moreover, reporters seemed to give the runner a cool reception. Throughout eastern Canada, in fact, there was a strange undercurrent to the publicity: Some seemed to think that Fonyo's effort demeaned the martyrdom of Terry Fox. Fox's family refused to meet Fonyo; to this day they have not communicated with him. The Canadian Cancer Society finally jumped on Fonyo's bandwagon as he crossed Newfoundland, announcing that it would take financial and organizational responsibility for the run, but by the time he reached Thunder Bay, his Journey For Lives had raised only

THE OUTSIDER OF THE YEAR AWARD 1985

# Winners, Too

## *Four more who made a difference*

## Ellie Hawkins

**Instructor/guide, Yosemite Mountaineering School. In October 1984 became the first woman to make a solo ascent of Half Dome**

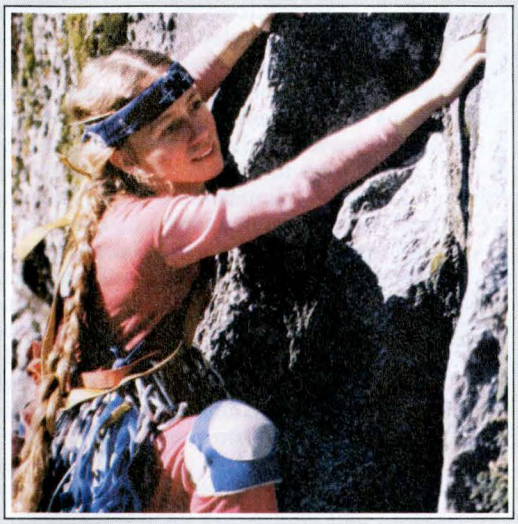


PHOTO COURTESY OF ELLIE HAWKINS

She weighs only 105 pounds, and she suffers from a perceptual handicap, yet Ellie Hawkins recently made landmark solo climbs in Yosemite National Park: first ascents by a woman of Half Dome's Northwest Face and El Capitan's Never-Never Land route.

Hawkins, 36, has dyslexia, commonly considered a reading disability. For Hawkins, it can also cause features on the rock face to reverse unexpectedly, presenting a mirror image of reality. "I have to remember to stay calm and concentrate," she says. "I've learned to control the problem with my mind."

Of her ascents, George Meyers, the author of a definitive guide to Yosemite, says: "It's extraordinary for anyone, but especially for her. When you solo you have to do twice as much. Her size and handicap make the task twice again as hard. The key is her ability to stick with it. She tries so hard you sometimes think it might kill her."

Hawkins climbs not only to overcome her dyslexia but to publicize the illness as well. In September Hawkins soloed a new 5.11 route on the Ribbon Falls Amphitheater and named it "Dyslexia." With the money she raised from the climb, Hawkins put together a presentation for dyslexic schoolchildren that focuses on how climbing can help them: "When you're climbing you're always thinking," she says, "and that keeps you from making mistakes. It's the same with overcoming dyslexia."

## Thomas Cade

**Professor of ornithology, Cornell University; director, Peregrine Fund, Inc. Responsible for reestablishing breeding populations of the nearly extinct peregrine falcon**

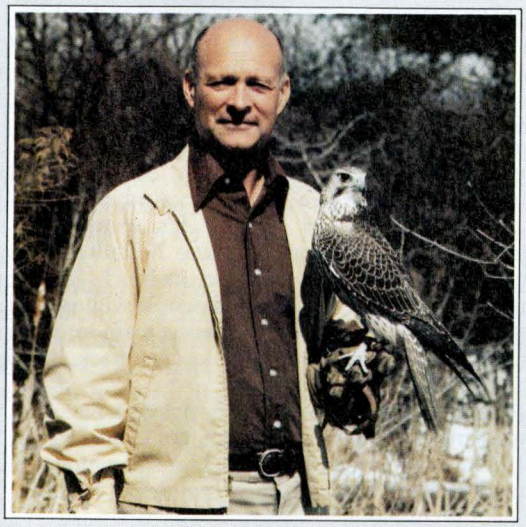


PHOTO COURTESY OF THE PEREGRINE FUND

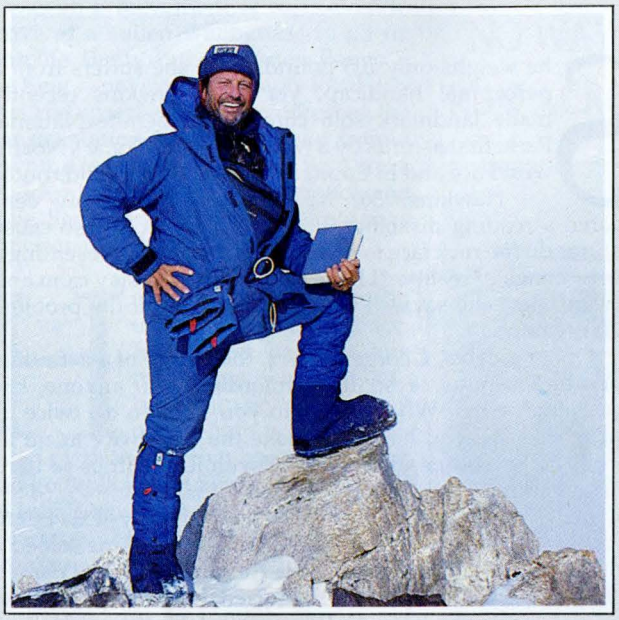
When Dr. Thomas Cade began his research with peregrine falcons in 1970, they were extinct east of the Mississippi River. He started with six pairs of falcons at Cornell, studying their breeding patterns in order to establish an environment in which the birds would propagate and in which their eggs would have the ideal conditions for incubation. More than 1,700 peregrine chicks have now hatched under the watchful eye of Cade, who introduces the young falcons into the wild before they are even able to fly.

"There is no precedent for a single person restoring an endangered species," says Stan Temple of the University of Wisconsin's Department of Wildlife Ecology. "Cade is also unique in that he's a private individual. Since his success the government has had to readjust its thinking about how individuals can play a role in endangered species programs. Before, private individuals were almost excluded."

Cade spends about a quarter of his time raising money for the Peregrine Fund he founded to support his work, testifying before congressional committees, negotiating grants for breeding facilities, and cutting through red tape on local, state, and federal levels. Dr. Archie Carr III, assistant director of Wildlife Conservation International at the New York Zoological Society, perhaps best summarizes Cade's task: "He has had to be a biologist *and* a statesman."

# Dick Bass

**Mountaineer, entrepreneur, owner/developer of the Snowbird Ski Resort. In April 1985 became the only person ever to climb the highest peak on each of the seven continents**



JAMES WICKWIRE

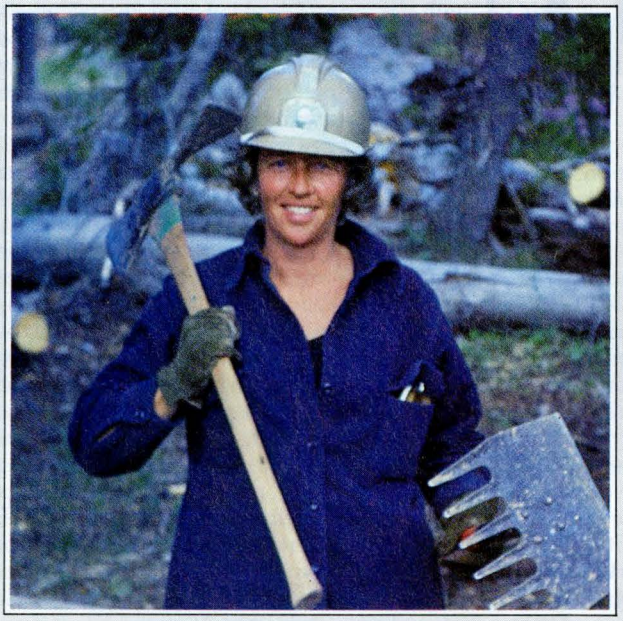
Dick Bass's first expedition was a climb of Mount McKinley in 1981. When he made it to the top of the highest peak in North America, he thought: Why not knock off the highest peaks on the other six continents? Never mind that he was 51, and that his only other major ascent was a guided trip up the Matterhorn in 1949.

It was a bold scheme, and an expensive one. In one year — 1983 — he and partner Frank Wells climbed Aconcagua, Kilimanjaro, Elbrus, the Vinson Massif, Kosciusko, and McKinley. The two also made an unsuccessful attempt on Mount Everest. Wells then returned to his job as head of Warner Brothers, but Bass persisted. In August 1984 he reached 21,600 feet on Everest, then was called off the mountain because of confusion over permits. After more aggravations (the mountain is booked until 1990) Bass was notified of a last-minute opening on a March 1985 Norwegian expedition, and rushed from Dallas to join the group. He made the summit with only 12 days' acclimatization above base camp. At age 55 he became the oldest person to climb Everest.

Bass has sometimes been criticized for his obsession with the Seven Summits Odyssey and for the $2 million spent on his adventure, but there is no denying the accomplishment. Well-known climber Gary Neptune, a veteran of solo ascents in the Himalaya, who accompanied Bass on Everest in 1983, echoes *Outside*'s own sentiments: "Despite the finances and technology involved, Dick Bass's climbs are primarily achievements of the human spirit, and no one has more than Dick."

# Kay Beebe

**Founder of the Volunteer Vacation Program, which enables people to spend their vacations doing trail work in national parks; vice-president of the American Hiking Society**



KAY BEEBE

Last year the Volunteer Vacation Program, which Kay Beebe, 50, founded through the American Hiking Society, contributed more than 17,200 hours of trail work to the national parks and forests, saving taxpayers at least $100,000 and completing work that might otherwise have been left undone. In 1979, when the program first began, there were two trail projects manned by a handful of volunteers. By 1985 Beebe had established more than 21 projects nationwide and enlisted 250 volunteers, one-third of whom had returned from previous seasons. Their work ranges from maintaining old trails and cutting new ones to pitching in on any other tasks that park personnel can dream up.

"Kay's contributions have been amazing," says Eric Seaborg, American Hiking Society president. "She built VVP into what it is today entirely as a volunteer. And she does it all without any drain on our budget. It's completely self-supporting." At first Beebe found it more difficult to convince park officials that volunteers could do the hard—and sometimes skilled—labor than it was to find people willing to spend their vacations working. Once she's sent a team into an area, however, "management always invites her back," Seaborg says.

Len Hooper, who writes the National Park Service's trail maintenance manuals, estimates that it would take $50 million to bring the trails up to standard—just for the national parks. "We depend on Kay's volunteers a great deal," he says. "We can't get enough of them."

half as much as Fox's Marathon of Hope had by that point.

Slowly, however, Fonyo's lonely struggle gathered attention. Fox had been handsome, college-educated, and articulate; Fonyo was still something of a pudgy kid, and he tended to parry reporters' questions with blunt, monosyllabic answers. A media image of an arrogant, socially graceless youth gained a certain currency in eastern Canada.

In Ontario Fonyo's spirit reached a low ebb. "I felt really down," he says. "I wanted to quit very badly. I told Dad I'd had enough. He said, 'You've got to go on. You'll let everybody down.' I said I'd sleep on it. The next morning I woke up, knocked on his door, and said, 'Let's go.'" Fonyo's father later would call that terse greeting "the happiest moment in my life."

Although Fonyo often managed 20 or more miles a day, there were frequent medical interruptions, and the run was proceeding much more slowly than planned. The bitter Canadian winter was approaching. On November 30 the Cancer Society asked Fonyo to stop running until February. He refused. The society then requested that he sign a disclaimer exonerating it if he or any other society "volunteer" got in an accident during the cold months. The society says he didn't sign it; Fonyo says he did. "If that's what they wanted to make their day brighter," he says scornfully, "it was OK with me."

Relations between the society and Fonyo remained touchy throughout the Journey For Lives. In the newspapers the society's run coordinator, Peter Caldwell, took a condescending tone toward Fonyo and seemed to exaggerate the society's role in the run. Says Fonyo: "I don't get along with Caldwell very well. I don't like PR people. They're bullshitters. I think it was a waste of money paying the guy. What did he coordinate? If he wanted to coordinate, he should have come on the highway, instead of staying in Toronto." As he pushed on through Manitoba Fonyo faced inhuman weather conditions. One day the temperature dropped to minus 65 degrees Fahrenheit. Often he ran through blizzards wearing arctic survival clothing, with goggles and a balaclava over his head. On icy roads he slipped and fell dozens of times.

On February 19, 1985, in Brandon, Manitoba, Fonyo had a terrifying setback: He had developed a painful swelling above the right knee. It was all too similar to the lump he had found on his left leg at age 12 and all too reminiscent of Terry Fox's midrun cancer recurrence. Fonyo flew to the hospital in Vancouver for tests. To his immense relief he learned that the swelling was not cancer-related; it was a hairline stress fracture. Ignoring his doctor's advice, he was back on the road six days later.

**FONYO KNOCKED ON HIS DOOR AND SAID, "LET'S GO." HIS FATHER REMEMBERS IT AS "THE HAPPIEST MOMENT OF MY LIFE."**




LORNE McCLINTON

*Family: Fonyo's parents, Hungarian émigrés, were fiercely loyal to their son's dream.*

As Fonyo pushed westward an extraordinary thing began to happen. The sparse gatherings that had lined Highway 1 grew to full-fledged crowds, and their mood warmed from curiosity to fervor. Despite his media image, the Canadian West greeted the runner as a hero. Fifty thousand spectators cheered him into Calgary; at press conferences teenage girls screamed his name in a fashion normally reserved for rock stars.

And the money began to pour in. The Canadian federal government contributed $1 million. The government of British Columbia pledged $1,000 for each kilometer run in the province, and Alberta offered to match the donations made by its citizens. Truck drivers would wrap $20 bills around pens and throw them out their windows; bus riders would pass the hat and thrust the collection into Fonyo's hands. And after each day's run Steve's father would unload the cash his son had stuffed into his pockets. As of last October the Journey For Lives had raised an astounding $11 million for cancer research.

On May 5 Fonyo ran through his hometown of Vernon. He was hobbling now, with a sore foot, leg cramps, and acute tendinitis. The thousands of miles had taken their toll even on his prosthesis. By run's end he would have worn out six artificial legs.

But the adulation swept Fonyo along. In Vancouver's B. C. Place Stadium he spoke to a crowd of thousands. "Some people call me a hero," he said. "I'm not a hero. I'm just a 19-year-old guy who got cancer." During the last two days of his run the pain reduced him to a walk, but on May 29 he dipped his artificial leg into the Pacific at Mile Zero, on the outskirts of Victoria. It had been 425 days since he began, and he had run 4,458 miles.

Four months after he had finished his exceptional mission, I went to Calgary to interview Steve Fonyo. He met me at the door of his suite on the 23rd floor of a nondescript downtown apartment building. He was shirtless, in white sailor pants and running shoes. I was surprised to see how short he was—about 5 feet 7. He looked to be in great shape, with a muscular upper body: The pudgy kid had vanished. His weight, I learned, including the metal leg, had dropped during the run from 155 to 138 pounds.

While he fixed himself a breakfast of fried eggs, Canadian bacon, and Diet 7-Up, I looked around the apartment. It boasted an appealing hodgepodge of artifacts. A framed poster bearing the message POVERTY SUCKS showed a svelte woman holding a cocktail as she leaned across the hood of a Rolls-Royce. I counted four attaché cases in the living room, yet old clothes lay in piles on the carpet, as in any other 20-year-old's digs. A pair of panda teddy bears sat in the corner — second prize in a demolition derby Fonyo had recently entered. A radio-controlled model helicopter was parked atop the TV set.

Fonyo is not naturally verbal, but in his blunt, colloquial way he is more articulate than I had been given to expect. He seemed also remarkably unspoiled: None of the PR smoothness he so disdains had rubbed off on him. He is enrolled in ground school at Calgary's Mount Royal College, hoping to become a helicopter or commercial airline pilot. There is a pilot for Canadian Pacific Air, he informed me, who has an artificial leg. Fonyo wants to ask the man how he handles a large jet's brakes, which require an ankle-flexing pedal maneuver with both feet.

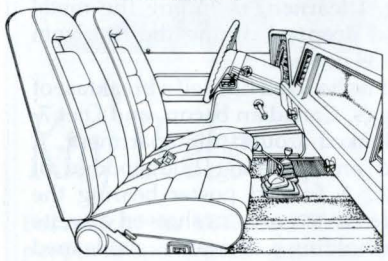
I asked Fonyo to go out and run

*Please turn to page 66*

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When you order a Ranger STX you get everything on it—we give you the works!

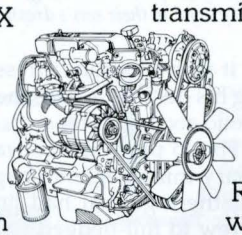


**The works**

Ranger STX comes loaded with standard features. Included at no extra cost are power steering and brakes, Twin-Traction Beam independent front suspension, P215 off-road tires, cloth and vinyl reclining bucket seats, special accent two-tone design, double-wall box construction, AM/FM stereo, tinted glass, black rear-step bumper, pivoting vent windows and skid plates.

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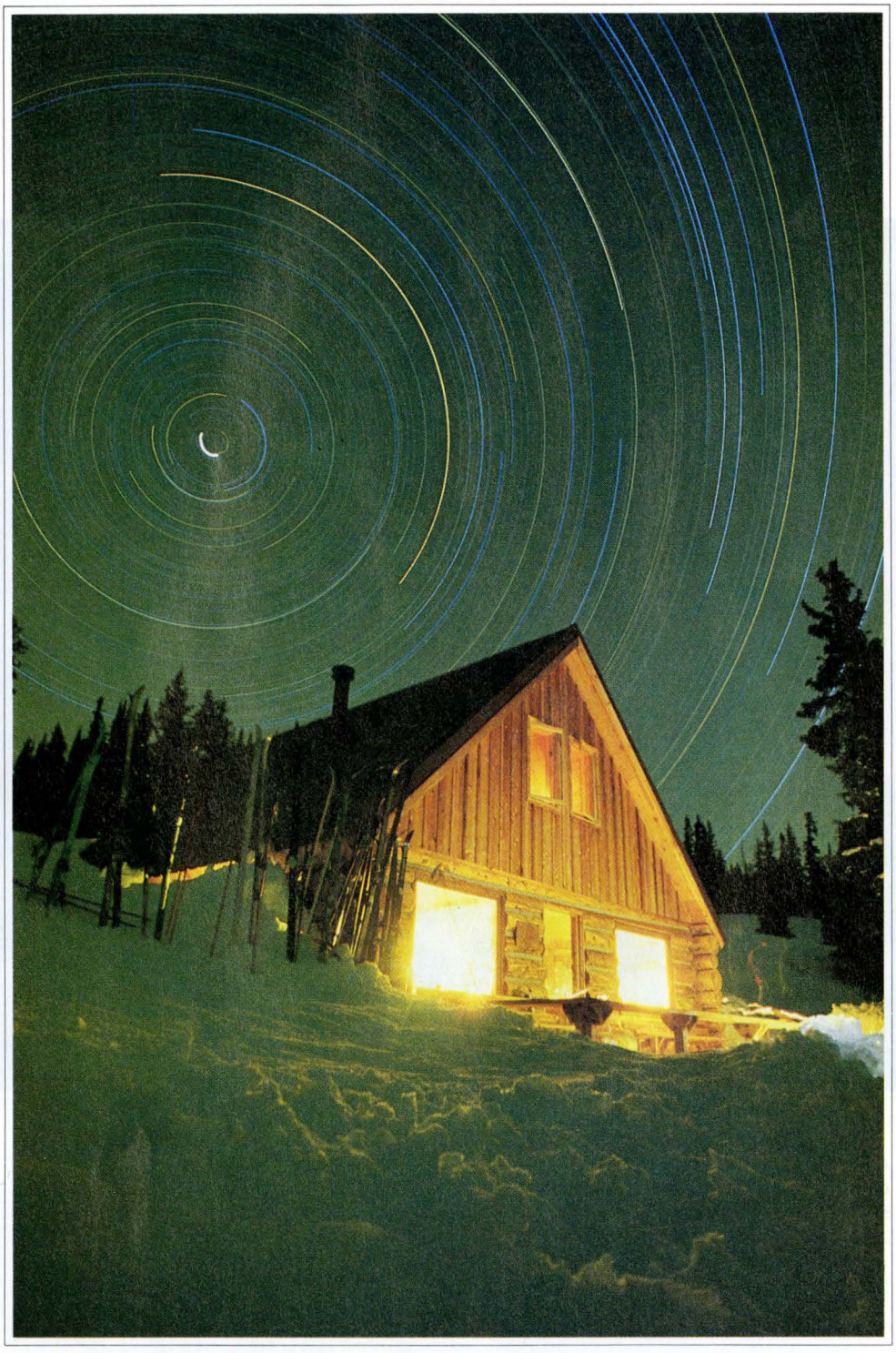

Ford



**Frank Rossotto** brought three separate images together to produce this montage. Using a 500mm lens for the sunset and the fence and a 105mm lens for the birds on the wire, Rossotto then sandwiched the film and shot it onto Kodak 25 professional film.



**Jerard Vandystadt** caught this airborne skier at the 1982 World Cup competition at le Brassus, Switzerland. Vandystadt took advantage of the sun's flare to give the jumper a jetlike trail. He shot with a 24mm lens set at 1/2000 second on Kodachrome 64 film.



**David Hiser** was touring Aspen's Tenth Mountain Hut & Trail System when he took this photograph of Margy's Hut. Using a tripod and an eight-hour exposure, Hiser was able to trace the path of the northern stars. He used a 20mm lens set at f/4 and Fujichrome 100 film. "The worst thing about that shot was getting up at 5 A.M., when it was 10 degrees outside, to go release the shutter," Hiser recalls.

# Beneath the Ice

## When winter drives a man under

By Michael Kiefer



JOE OLIVER WAS 14 WHEN he made his first ice dive into an Elgin, Illinois, quarry. It was a gloomy, overcast February day, ten degrees above zero, and the winds howled as he and other intrepid members of his diving club shoveled snow off the ice. Chain saws grudgingly buzzed through ice a foot and a half thick to open their entry.

Oliver soon found himself star-

Photographs by Robert McQuilkin

ing into a black hole filled with slush. He sat down, put his legs into the water, and dropped into the darkness. After a long, cold moment his eyes adjusted to the low light, his body to the numbing tingle of water around his face mask and the leaks in his suit. Thirty-five feet below, the wreck of a Model T sat on the bottom of the quarry next to a tree still rooted in what was once dry land. He pulled out his knife to carve his initials in the waterlogged wood.

Then his foot cramped. He must have ignored the tugs from above on the nylon rope that linked him to the rope tender on the surface who was checking to see that he was all right. The rope tender assumed Oliver was in trouble, panicked, and took off running, rocketing him to the surface. Oliver made a 15-second ascent that should have taken 60 seconds under normal decompression. "I didn't panic," Oliver recalls. "I just exhaled, screaming, all the way up. He was pulling so hard that if I had been aimed directly at the hole, I would have popped right out of the water. Instead, I rammed my head on the ice."

He wasn't injured — angered, yes, but not deterred — and the next day he went back under the ice. Now 28, Oliver has gone ice diving in the Great Lakes and in midwestern quarries every winter since.

BENEATH THE WINTER ICE is a world that alternates between sensory deprivation and sensory overload. The scant light diffused by the ice has an eerie, bluish cast. Fish drift motionless, their metabolic functions so slowed by winter that divers can almost pet them. The saws of ice fishermen cutting holes on the far side of the quarry vibrate across the water, and cracks in the expanding, shifting ice go off like gunshots. "You can feel the shock waves go right through your body," says underwater photographer Robert McQuilkin.

The bottom surface of the ice may be sculpted by thaws and shifting currents; or set with thousands of diagonal, fingerlike air bubbles; or pocked with tiny bumps stretching off into forever, like a giant, inverted golf ball laid out flat.

With a squeeze of a valve, the diver can shoot air into his suit and then flip over to walk upside down on the ice ceiling. Light filters from beneath his feet, disorienting but enthralling. Air bubbles trickle down (which is now up) his body, puddling in mercury pools at his feet. He pushes off from the ice, bouncing down into the blackness, shoots air into the suit, and plummets back. With three tugs on the rope, he signals for the rope tender to pull him out, to run across the





*Cross-training: Joe Oliver skiing to a dive site on Lake Superior (above) and ascending through the slush of a Wisconsin quarry (preceding page).*

One fellow slipped under the surface while clearing his mask in the hole, panicked, and tried to gouge his way out with his knife.






*Iced in: Oliver checks his buoyancy (top); air bubbles trapped by the ice ceiling form pools that resemble mercury. Gearing up with Bob McQuilkin (above, in black suit) before a quarry dive; the hole is triangular to ease entry and exit.*

top surface so that he can water-ski across the bottom surface. And when he finishes playing, he has to reorient himself to the land of the upright.

ONCE THE DOMAIN OF scientists and rescue divers, ice diving has emerged as a winter sport for the hardy northern diver bored with winter and bugged by the brevity of the diving season. It's not as risky or as uncomfortable as it once was because of the development of regulators that won't freeze open and the perfection of the dry suit.

Wet suits, which maintain body heat by warming the water entering the suit, are less than desirable when the water temperature is 34 degrees. "You know how it felt when you were a kid and you got your face shoved into a snow bank?" Oliver asks. "Like tiny, little ice picks sticking into your face—it's like that over your whole body. Your eyes immediately begin to pour out tears. I sit and chew on my regulator until it goes away." Dry suits, then, are the garments of choice, along with boots, gloves, full face masks, and long underwear.

An estimated 2,000 North American divers will go under the ice for sport this winter. But though that number is growing, it is a sport for only the most committed of divers, requiring a hefty investment in gear and at least five willing participants—two divers, one rope tender, and two emergency divers—for safety's sake.

The logistics approach the overwhelming: spending a day checking suits, tanks, regulators, lights; lying awake in bed at night, waiting for the alarm clock to ring; piling into the car early enough to get into the water by late morning, when the sun is at its warmest; skiing or snowmobiling out to the dive site. The work is less than pleasant: The hole could take half an hour to cut with a chain saw or pickax—it is triangular in shape for easier entry and exit — and then the half-ton block of ice must be slid far enough under the ice that it won't slip back and close off the hole while the divers are below. The divers mark the hole by shoveling a wagon wheel in the snow with spokes one-third longer than the safety rope and arrows that point in toward the hole in case a diver drops the rope. Light that filters through the wheel is visible from more than 60 feet below.

Only two divers go below at once to avoid the risk of tangling the nylon safety cords looped around their wrists. One tug on the line from below asks the rope tender for slack; two tugs means "all OK"; three means "get me the hell out of here!" Barring complications, the



*Bottoms up: A diver "water-skis" along the bottom surface of the ice.*

divers can stay underwater for 45 minutes to an hour, longer if they're working and generating heat. "The first sign of hypothermia," says Bob McQuilkin, "is that you don't react. And then your reasoning is impaired, and you can't figure out how to do things."

"Prior to the onset of shivering, divers must get out," says Dr. Joseph MacInnis, a Canadian physician and ice diving research pioneer, the first man to dive and film beneath the North Pole. "If they feel cold, they're becoming a threat to themselves, because the performance falloff is pretty dramatic in terms of mental and physical capabilities.

"If you get cold on the way to the ice hole, then you haven't planned it well," MacInnis continues. "Over the ice hole you should have some warmth and safety capabilities—at least a tent with a heater in it. If you climb out of the water and you're really cold and you don't have a place to go, then you're asking for trouble."

Says McQuilkin: "I've never dived under ice when my hands and face stayed warm."

Regulators can also freeze open, forcing divers to the surface. To buddy-breathe, they would have to remove their full face masks, exposing eyes and faces to the near-freezing temperatures. And there's no going straight to the surface in an emergency—there's only one door out. "The most fundamental thing," says MacInnis, "is that you need to be sure you're going to find the hole—because you're sure not going to be able to scratch your way through if you run out of air."

If the diver loses the rope, rather than search for the hole, he swims directly to the surface and hangs vertically right under the ice. A back-up diver comes in with a rope twice as long as the diver's and swims in a circle at rope's end, two to three feet below the surface, to snag the lost diver.

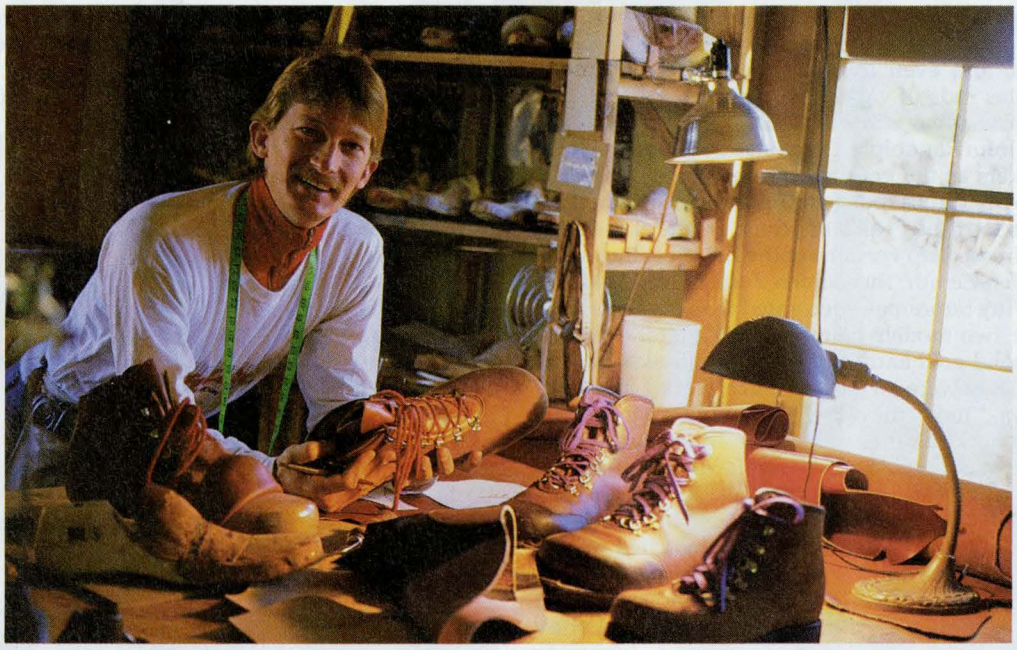
If the diver attempts to search for the hole by himself, he risks becoming disoriented and wandering even farther away. Still, the cold and the confinement can make divers overreact. McQuilkin recalls one fellow who slipped under the surface while clearing his mask in the hole, and instead of staying calm, turning around, and climbing back out, panicked and tried to gouge his way out with his knife.

Given the risks, the discomfort, the logistics, once may be more than enough for some divers. But others return winter after winter. "You forget," Oliver says. "Besides, it's like doing things your mother always told you never to do." ◻

*Michael Kiefer is an associate editor of* Outside.

# COLLECTOR'S ITEMS

*They're not all new, not all high-tech, not all pretty—but they're all classic—and always reliable*



GARTH VAUGHN

By Michael McRae

There comes a time when your devotion to a sport becomes total, when even very good equipment will simply no longer do. You want the finest—not for the status or the ego-gratification or the acquisitiveness—but for the investment of wisdom and experience a craftsman has made in it. Fishing with a Russ Peak fly rod or riding one of Charlie Cunningham's mountain bikes, you may feel as if you have finally found someone who speaks your language—someone who understands what a piece of equipment must do. The hours such artisans spend at the workbench are backed by many more in the field. This cumulative wisdom costs dearly, but what you get is more than fine craftsmanship and a certain indefinable feel.

In critical situations — weathering a bad storm in a Noall tent, hiking the Continental Divide in a pair of Calden boots, rounding a buoy marker on a Naish Hawaii windsurfer — there is the certainty that the gear will not fail you. And that kind of confidence is priceless.

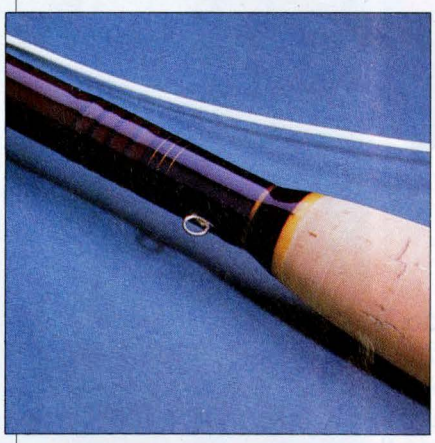
*Traditional ties: Colorado bootmaker John Calden's footwear has its origins in the Austrian Tyrol.*

## AN ACCLAIMED CAST

Russ Peak, now in his seventies, began making fly rods for a few select customers in the 1940s. Since then, he says, "I have never been caught up on my orders." It may take three years or longer for Peak to complete a rod, but when he does it will cast *precisely* to your specifications. Anglers from Dwight D. Eisenhower to Lefty Kreh, perhaps the world's most renowned fly fisherman, have lauded him, but one of Peak's highest accolades comes from Arnold Gingrich, the founding editor of *Esquire* and a fly-fishing devotee. In *The Joys of Trout* Gingrich called Peak "the Stradivari of the glass rod . . . a complete master, both knowing and caring."

Peak's Zenith (shown), his top series, was originally made from thin-walled fiberglass, but today he uses glass, graphite, or boron—or all three—pairing a boron butt, for instance, with a glass or graphite tip. By changing tip tapers, wall thicknesses, and even the graphite filament arrangement, Peak creates rods of varying strength and versatility. "They feel like part of your arm when you cast them," says *Fly Fisherman* editor John Randolph. "Peak stands out among truly great rod makers as the genius designer." Most of Peak's customers equip their trout rods with British reels by Hardy.

The highest form of Peak's art came in the mid-1970s when he made dressed-up versions of the Zenith—the Silver Zenith, the Golden Zenith, the Golden Zenith Ultra, and the Golden Zenith Ultra Supreme—decorated with precious metals. Of the latter two models he made only a total of seven rods, two with solid gold hardware. Each required some 500 steps to craft. "They were so bloody much work I just gave them up," he says. "Today they'd sell for about $800 to $1,000, but you'd have a heck of a time talking me into making one." The bulk of his production—perhaps a hundred rods a year—is in $300 "rack" rods made to his liking and then matched to an order on file. His special-order rods cost more, because they take much longer to make. How long? "I have no idea," Peak says. "I tried to keep track once, but keeping track took so long I found I wasn't getting anything done." You can reach Peak at 21 N. Allen Ave., Pasadena, Calif. 91106.



## THE BARE BIKE

To the uninitiated, Charlie Cunningham's unadorned aluminum mountain bikes may look like anything but state of the art, but they are widely recognized as such. "They're as responsive and controllable and as close to indestructible as possible," says Marshall Livingston, owner of Point Reyes Bicycles in Marin County, California, the birthplace of the sport.

"I've ridden my Cunningham in every conceivable situation," says Steve Cook, a racer and bike-shop owner in Crested Butte, Colorado. "Even when you're on the road it's conducive to high speed, to hammering, to pushing the big gears. It's great on climbs, it's nimble, and it's great on descents. I have a lot of confidence riding it. The Cunningham is just that one bit better."

Schooled as an aeronautical engineer, Cunningham designed his first model in 1976 after watching a mountain bike race near his home in southern Marin County. The bikes were mongrels—with newsboy frames, 10-speed gears, and motorcycle handlebars—and they were inefficient.

"Instead of taking existing technology and plugging it together, I've tried to design a bike from the ground up as an integrated piece of equipment and make it as perfect as possible," Cunningham says. He uses oversized aircraft-grade aluminum tubing to give the bike strength and rigidity. Its tubular fork crowns, roller-cam brakes, seat post, wheel hubs, handlebars, stem, and even its tires are either his own designs or ones that grew out of his association with fellow Marin builders Steve Potts and Mark Slate.

Cunningham makes three models, each weighing a scant 25 pounds or so: the Racer, for serious competitors; the all-purpose Indian (shown); and the Little People's Bike, for those shorter than 5 feet 5. Each of the 60-odd bikes he annually builds costs about $2,500 and has a lifetime guarantee (repairs guaranteed in 72 hours). For an additional amount he will finish the welds and have the bike painted, even though he considers paint superfluous. "The bike's beauty," says Cunningham, "is in its simplicity and function." Write Cunningham at 121 Wood Lane, Fairfax, Calif. 94930.



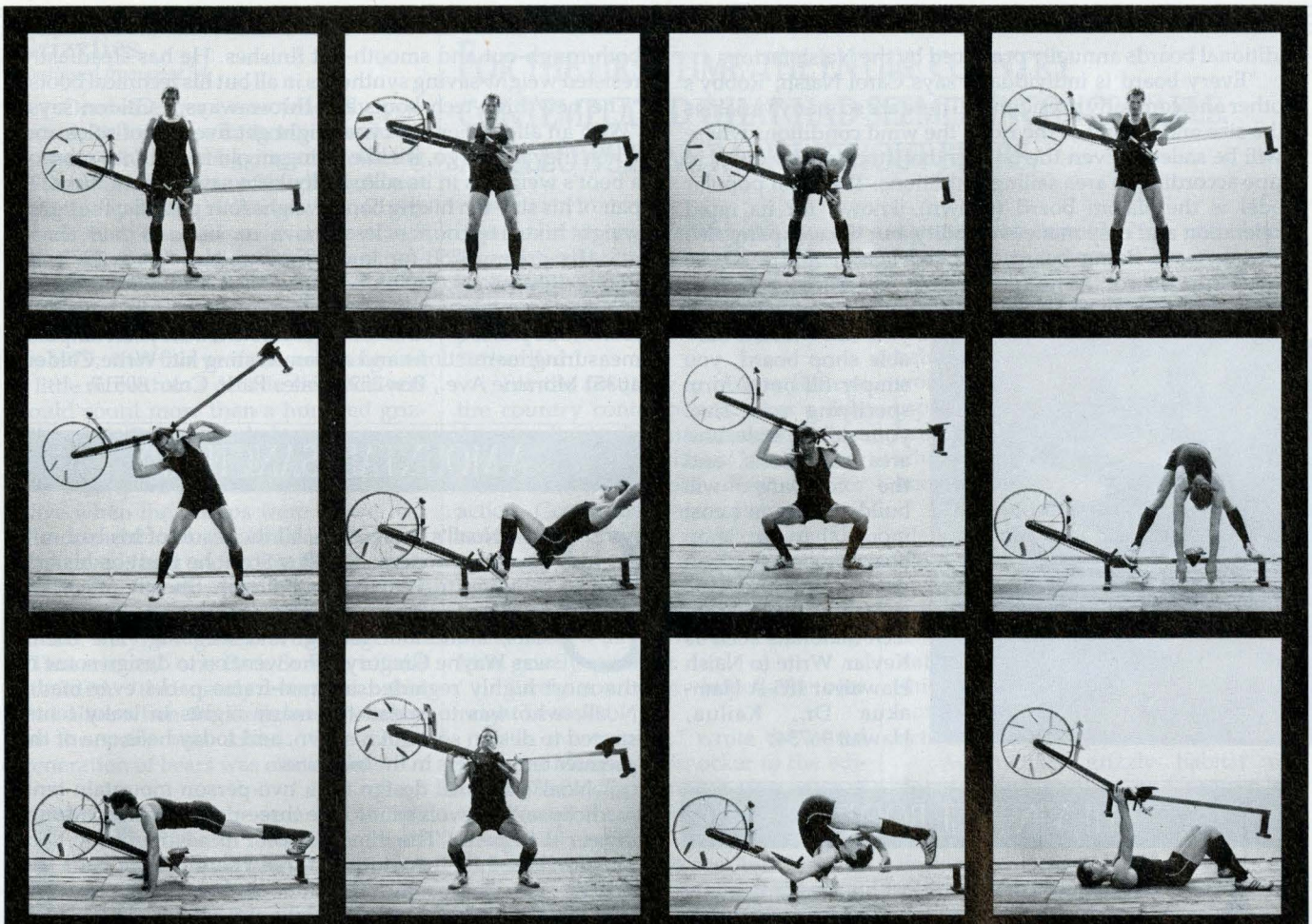

## THE JIBE MASTER

Robby Naish is the world's top boardsailor, having dominated the World Cup circuit since 1976, when he was all of 13. That year the Naish family went into the custom board business, and their boards have since earned a reputation as the BMWs of the industry. Fashioned from fiberglass over foam cores, they are beautifully designed and crafted, fast, responsive, and easy to resell—important in such a young and rapidly evolving sport.

"On a Naish board people report a huge difference in their sailing ability right away," reports Tom Lloyd, owner of two sailboard shops in California. "They can be fumbling around with their jibes on other boards, get on a Naish board, and they're turning that same afternoon."

Naish Hawaii boards are designed by Robby's father, Rick, and shaped by Harold Ige. The elder Naish was an early hotshot surfer in California, and Ige (he signs his boards IGGY) reckons that since the 1960s he has shaped 350,000 foam blanks for either surfboards or sailboards. The pair collaborates on perhaps 50 race boards a year for Robby or other Mistral team racers, and Robby provides them with instant feedback on their subtle hull modifications. Whatever features work in competition may then appear on some of the 600

PHOTOGRAPHS BY LARRY EVANS





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additional boards annually produced by the Naish factory.

"Every board is individual," says Carol Naish, Robby's mother and company president. "There are so many variables—the size and weight of the rider, the wind conditions where it will be sailed." Even the boards that stock shops differ in shape according to area sailing conditions. The most popular model is the slalom board (shown), known for its rapid acceleration and easy maneuverability, but the company also makes a wave-riding board, a speed board, and a $2,000 World Cup board. A no-frills slalom board costs $700 (a camber-induced sail and hardware add about another $900). If you can't find a suitable shop board, you simply fill out a form specifying your size, your sailing style, and area conditions, and the company will build it; it won't cost more than a shop board, unless you want a special shape or paint job, or high-tech materials such as Kevlar. Write to Naish Hawaii at 155-A Hamakua Dr., Kailua, Hawaii 96734.

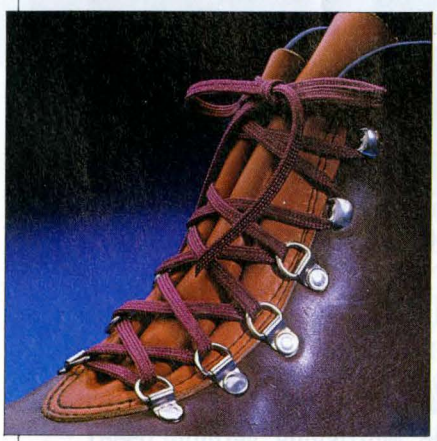



## THE VINTAGE BOOT

After mountaineer Ed Connor lost his toes to frostbite on Aconcagua, he came to John Calden for his next pair of technical climbing boots. Calden designed Connor a boot in which his foot would not slide forward and later a lightweight mountain shoe with a spring-steel shank to keep the boot toe from curling up. Calden has made size-18 double boots for mountaineers, telemark boots for extreme skiers, and hiking boots for people who want superior fit and durability.

"From the very beginning my hiking boots felt good," says Howard Krebs, one of Calden's first customers. Krebs bought his pair in 1978, after he "got tired of breaking in a new pair of Fabianos or Raichles every two years." Since then he has worn them to walk a good part of the Appalachian and Pacific Crest trails. "The boots need resoling but they're still in great shape," Krebs reports.

Before striking out on his own Calden had worked as a cobbler for Steve Komito, who in 20 years of business has become something of a high priest of boot repair. For all of his footwear Calden still relies on the basic design of an Austrian boot that Komito imported in the late 1960s, but he has incorporated improvements, such as oak-tanned leather interior heel counters and inside-stitched soles. He uses high-quality full-grain leather on the uppers and offers both rough-out and smooth-out finishes. He has steadfastly resisted weight-saving synthetics in all but his technical boots. "The new high-tech boots are throwaways," Calden says. "With an all-leather boot you might get five sets of soles and when they finally go, it's like losing an old friend." As most of a boot's weight is in its sole, he looks to save weight there. A pair of his size-ten hiking boots weighs four pounds, the lightweight hikers ten ounces less.



His prices: $250 for low-top mountain shoes; $375 for lightweight hikers; $400 for regular hikers (shown); $675 for double mountaineering boots. In a good month he might make four pairs. If you can't see him, he'll mail you complete measuring instructions and a foam-casting kit. Write Calden at 351 Moraine Ave., Box 2523, Estes Park, Colo. 80517.

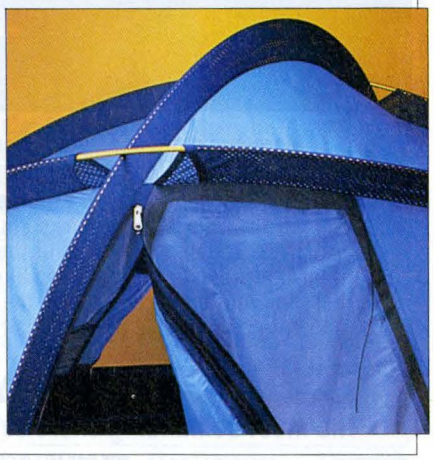
## A MOUNTAIN SANCTUARY

Steve Noall's designs are all the result of his bad outdoor experiences. As a Boy Scout he went on his first camping trip carrying a suitcase. Shortly afterward he and a friend designed backpacks made from wood slats, aluminum tubing, and webbing. The friend was Wayne Gregory, who went on to design some of the most highly regarded internal-frame packs ever made. Noall, who was to spend too many nights in leaky tents, started to design some of his own, and today he is one of the premier tentmakers in the business.

Noall's original design for a two-person mountain tent, the Eclipse, has evolved into the three-person Eclipse Mountaineer II (shown). The dimensions of its asymmetrical floor plan are based on the width of three Therm-a-Rest pads laid side by side. Because Noall cannot abide someone crawling over him, he created two doors. Like any good mountain tent, the Mountaineer is freestanding, spills wind and sheds snow, and has flow-through ventilation. There are also two vestibules and doors that roll up, not down, so they are not perpetually tromped on. It weighs six and a half pounds in the four-season model ($350), six in the three-season ($315). It may well be the tightest, most stable tent you can buy.

But it is Noall's painstaking attention to detail that really distinguishes his tents. "The workmanship is spectacular," says Mike Schonhofen, a Seattle equipment designer and retailer. "The canopy seams are hot cut, sewn once, then taped and top-stitched. We've carried every other brand of tent in the last 11 years, except North Face [which has a competing store in Seattle], and we have dropped every one of them for the Noall."

Working by themselves, Noall and his wife, Janet, who is the seamstress, make five to six tents a week. Besides the Mountaineer II, they offer the slightly smaller Mountaineer ($325) and the four-person Tahquitz ($398). Defects are repaired free of charge. Write Noall Mountaineering at 59530 Devils Ladder Rd., Garner Valley Mountain Center, Calif. 92361. ◻



*Contributing editor Michael McRae wrote "A Simple Quest" in the December issue.*

## Grizzlies

*Continued from page 34*

Once the bear was federally protected, Yellowstone authorities could no longer prohibit the tagging and collaring of the animals. But now Knight could not find many bears. Whereas the Craigheads had trapped an average of 6.8 adult sows a year, the IGBST was trapping 3.5. Whereas the Craigheads had identified an additional 15 bears a year, researchers were now finding only 7.4. By 1979, after five years of searching and a little more than a decade since viewers could count more than a hundred grizzlies at the Rabbit Creek dump in an evening, the IGBST had tagged a total of 46.

Nearly all the bears that had been alive when the dumps were closed had disappeared. Of 23 females that the Craigheads had tatooed on the lower lip and were still alive in 1971, the IGBST had found only two. By 1980 Knight had found only six grizzlies over age 12. "That means," one Park Service official confided, "that nearly every bear that was alive when the Craigheads worked in the park was killed. One entire generation of bears was eliminated."

During the summer of 1982 Richard Knight made an agonizing reappraisal: There were not, as authorities had maintained for a decade, 350 grizzlies in Yellowstone. Even using assumptions far more optimistic than the Craigheads had employed, Knight and Eberhardt could only estimate a population of 200—and that one was shrinking. Whereas, for instance, the IGBST in 1974 saw an average of 2.5 grizzlies on every observation flight, by 1980 the number had declined to 1.16. The Yellowstone grizzly population, Knight and Eberhardt concluded, was declining at the rate of about 2 percent a year.

And although they looked, they could find no sign of expected compensatory mechanisms. "Long-term stability at such levels," they noted, "requires some sort of inherent regulatory mechanism. Unfortunately, the nature of that mechanism is as yet unknown." Indeed, grizzly mortality seemed to be reaching epidemic proportions. In 1981, 17 had died—15 of them killed by man. Now, at the close of 1982, 17 more had died. What was worse, six of these had been "removed" by bear managers and researchers.

Urged by Knight, Roland Wauer, chairman of the Interagency Grizzly Bear Steering Committee, sent a memorandum to committee members. "The survival of grizzly bears within the greater Yellowstone ecosystem," he wrote, "is dependent upon reversing the current population decline." His message quickly leaked to the press, and within two weeks *The New York Times* had reported that the Yellowstone grizzly was "imperiled."

**FOR THE FIRST TIME THE ENTIRE COUNTRY CONTEMPLATED WHAT HAD SEEMED INCONCEIVABLE: A YELLOWSTONE PARK WITHOUT BEARS.**

For the first time in history the entire country contemplated what a few years earlier had seemed inconceivable: a Yellowstone Park without bears. There were renewed public demands for action. Government agencies and environmental groups rediscovered the problem. Enormous media attention—including a CBS News special—was focused on the problem. The Audubon Society threw its enormous influence behind grizzly recovery.

Surely now, many hoped, the bear might be saved.

"In my opinion," wrote the noted biologist Maurice Hornocker to the editor of *The Wildlifer* a month after news of the Wauer memorandum broke, "the Craighead brothers have been completely vindicated. To me, this is a victory for the grizzlies because now, presumably, the Craigheads' recommendations will be followed."

Hornocker's optimism, however, rested on his hope that we would learn from the past.

### PART II

## THE UNHOLY ALLIANCE

By 1982 it was becoming apparent that Yellowstone's grizzlies had suffered from insufficient nutrition. The average spring weight of adult males had dropped dramatically, from 543 pounds during the dump era to 408 by 1982. The spring weight of five-year-old females had fallen 45 pounds; mean litter sizes had dropped from 2.2 to 1.9; and maturation had slowed from five to more than six years, thus shortening reproductive life. The average age of bears was going down, suggesting a shorter average life span.

Clearly, Knight and Eberhardt noted, the grizzly had missed the dumps. "The population has not recovered . . . and many continue to decline," they wrote.

The two researchers began to wonder: Could Yellowstone actually support a viable population of grizzlies under natural conditions? No one knew. Incredible as it seems, 17 years into the "new" bear policy, a study to test its premise had not yet been done. While some studies had measured the use of habitat, there had been no systematic work done on the question of carrying capacity—comparing, for example, the Yellowstone habitat with other ranges where a viable bear population was known to exist.

"Can the area sustain a grizzly population?" asked the National Parks Wildlife Advisory Board Wildlife Committee in April 1985. "This critical question demands a far more basic holistic view than researchers and managers have given to date. It would appear that the recovery ship has been launched . . . while it has not been established where or if the actual destination port actually exists."

Meanwhile, grizzly habitat was deteriorating both in and around the park. Although required to do so by law, the Fish and Wildlife Service had not yet designated critical grizzly habitat, and was not planning to do so. The Park Service was constructing a new major development, Grant Village, on the site of five prime grizzly fishing streams. The pine bark beetle was spreading throughout the park and was threatening the whitebark pine, whose nut is the principal grizzly food in the fall. Finally, "overgrazing by an unnaturally high population of elk in the Park," wrote independent researcher Charles Kay in 1984," has greatly reduced berry production of shrubs and completely altered willow and aspen habitats so that they presently have almost no food or cover value for the grizzlies."

The Craigheads, now officially unconnected with the park but monitoring the situation there closely, continued to urge that feeding centers be established in remote areas of the Yellowstone backcountry. Some of the park's 30,000 elk could be shot and left for the bears, they suggested, providing a magnet that might keep them in the park for longer periods.

"Concentrating" bears in this way, Frank Craighead urged in 1984, "is a natural phenomenon, and one that we might again encourage in Yellowstone." To emphasize the naturalness of the areas, the brothers called them "ecocenters."

Ecocenters, John Craighead ex-

plained to the Audubon Society in Casper, Wyoming,

> represent large dependable sources of high-calorie food .... Ecocenters can be natural or man-made; the bears don't differentiate .... We can speculate that such ecocenters were present in the West before the arrival of the white man ... where large numbers of bison drowned or were winter-killed at the Great Falls of the Missouri... [at] the Indian piskum or buffalo jumps in and around Yellowstone ... [and] at spawning sites of salmon, steelhead, or Dolly Varden trout in the Upper Clearwater and Salmon rivers of Idaho.

Such ecocenters, John Craighead concluded, "have many positive values for the bear populations associated with them. They seem to confer a margin of safety that is absent in ecosystems where neither natural nor man-made ecocenters exist."

Knight, too, began to suspect such a step might be desirable. "If we want the bears," he told me in 1985, "we must consider the options. An option is supplemental feeding." But, he added, "feeding grizzlies is also an admission—an admission that present policies are not working."

It was an admission that many found too painful to make. Government officials and leading environmentalists remained steadfastly opposed to supplemental feeding. They said they didn't want to interfere with nature.

It doesn't fit with the "national park concept," said Yellowstone bear manager Gary Brown, adding: "We don't believe it is necessary, and it's not part of the natural process we are attempting to allow to take place."

"If we are not going to have wild bear," said Durward Allen, member of the National Park Service Advisory Committee and chairman of Audubon's Science Advisory Committee, "we are going to have no bear at all."

"We cannot play God," Yellowstone's research biologist, Dr. Mary Meagher, told me.

"We don't want to make Yellowstone a zoo," said both Wauer and Chris Servheen, coordinator of the Grizzly Bear Recovery Program for the Fish and Wildlife Service.

Human refuse, as well as elk killed by rangers, these people agreed, did not belong in the wilderness. To make a plea for garbage or supplemental feeding, therefore, was an indication that one lacked sound ecological values. Yet this question had nothing to do with science. It was, one might say, a matter of taste. The question — What is natural? — had piqued philosophical curiosity for millennia. But the issue it raised was metaphysical. It revolved not around

## THE BEARS ARE DYING BECAUSE THE GOVERNMENT, AS A MATTER OF POLICY, IS KILLING THEM.

facts about the world, but around how a culture saw itself in relation to the world. And as philosophers had failed to resolve the question after 3,000 years of debate, it was unlikely that bear managers would settle it before the future of the Yellowstone grizzlies was sealed.

Believing garbage to be artificial was, therefore, not a scientific hypothesis, but a cultural bias. Scientific bear management would have ignored the word "natural" altogether. Instead, a policy of weaning bears from "unnatural foods" continued while bureaucrats and environmentalists, sharing a metaphysics, joined in a common cause to defend this policy against the Craigheads and others who urged supplemental feeding. How one stood on the question of garbage had become the litmus test of environmentalism.

By the early 1980s many of those officials who, while in Interior, had been architects of bear policy, now occupied influential positions in prominent environmental organizations: Starker Leopold, former Park Service chief scientist, was an influential member of several environmental organizations. Nathaniel Reed was on the board of the Audubon Society — later to become chairman of its Executive Committee — and the board of the Nature Conservancy. Durward Allen was also on the board of the Audubon Society and an advisor to the Boone and Crockett Club. Sigurd Olson, an author and prominent conservationist, was a member of the National Parks Advisory Board and honorary president of the Wilderness Society. Robert Herbst, a former assistant secretary of the Interior, was president of Trout Unlimited. Cecil Andrus, former secretary of the Interior, was on the board of Audubon. Curtis Bohlen, a former deputy assistant secretary of Interior, was on the Washington staff of the World Wildlife Fund.

Nearly the entire early bear bureaucracy, in fact, was safely ensconced atop the mastheads of the mainline environmental groups. Endowed by these offices with unassailable ecological authority, some, such as Leopold, Allen, and Reed, continued to defend government bear policy. Others simply declined to criticize.

For some groups, such as the newly formed Greater Yellowstone Coalition, the worsening plight of the grizzly became a powerful political weapon. Anxious to protect habitat surrounding Yellowstone, they rightly cited the bears' need for great range as a reason to leave wilderness intact. And the worse conditions became for the bears, the stronger the groups' argument against the spoiling of the range. The ecosystems approach, they believed, was inadequate when limited to Yellowstone; it would only succeed if the Park Service could control a larger area. The more ecosystems management failed in the park, the more threatened the bears, the stronger the argument in favor of extended control of surrounding lands. The grizzly had become a rope in a tug of war over land use.

In this way a delicate balance was upset. Relinquishing their self-appointed role of watchdog, environmentalists formed, with the Park Service, an unholy alliance. The watchdogs had joined with the wolves against the sheep. The government, no longer facing resistance from its traditional critics, had no real opposition. Park Service bear policy had become a juggernaut, rolling inexorably, crushing those who tried to stop it. Its first victims — the Craigheads, Seater — paying a price for principle, were soon followed by others.

Nathaniel Reed, now an influential member of the Audubon board, had moved from architect of Interior bear policy to watchdog of it without missing a step. And the bear problem, he discovered, had become the "Knight problem."

As Knight had found so few bears, the Interagency Grizzly Bear Steering Committee in 1982 asked him to embark on a program of "saturation trapping" with the hopes of finding more of them. Knight objected, however, on the grounds that intensive trapping would only kill more bears. "I was coming up with the wrong numbers," Knight explained. "They wanted me to continue with research until I found more grizzlies. They wanted me to do this because as long as they can say, 'We don't know enough,' they can postpone making any management decisions. But I can't find any more grizzlies, because there aren't any more."

As with the Craigheads, it was once again time to blame the messenger.

"Dear Nat," Yellowstone biologist Mary Meagher wrote to Reed in August 1982, "... As for the Knight problem... Dick is obviously committed to one objective, a paycheck....When it comes to research design, he simply goes the line of least resistance...."

Reed sent copies of Meagher's letter to some members of the Audubon board, including Russell Peterson, Audubon's president, Leopold, and Allen, marked CONFIDENTIAL—YOUR EYES ONLY.

"The Knight situation remains clouded," Reed noted to his Audubon colleagues, "...I urge the senior staff to concoct some strategems for our consideration. For instance: ...Meet with Chris Servheen and state our problems. We could invite him to Milwaukee [site of the September board meeting], or staff could meet him in Washington. Servheen could be the key man.... We may lose a valuable moment unless preliminary work is organized and accomplished."

As Reed had noted, Servheen turned out to be the key man. As Recovery Plan Coordinator, he had become the most prominent spokesman for government grizzly policy. Meanwhile, he attempted to gain more control of research data that might prove embarrassing. According to the minutes of the August 11, 1983, Grizzly Bear Research Subcommittee meeting: "Servheen said that considering that this raw data was fairly sensitive, it would be most useful and most secure to have the data analysis under Servheen's control."

And as Servheen's star ascended, Knight's waned. Often uninvited to important meetings, Knight and his assistants failed to get expected promotions.

The period after the publication of the Wauer memorandum in the fall of 1982 was therefore a time of false hope for those who, such as Dr. Hornocker, had expected to see a policy reversal. Sharing an aversion to supplemental feeding as a way to save the bear, both government officials and environmentalists responded with a flurry of activity that, while giving the appearance of change, was to ensure that everything would ultimately remain the same.

Wauer was reassigned to the Great Smoky Mountains National Park, and bear management was put into the hands of more high-level bureaucrats. The Interagency Grizzly Bear Steering Committee was replaced by the Interagency Grizzly Bear Committee, which was chaired by the regional director of the Fish and Wildlife Service and included, among others, the regional


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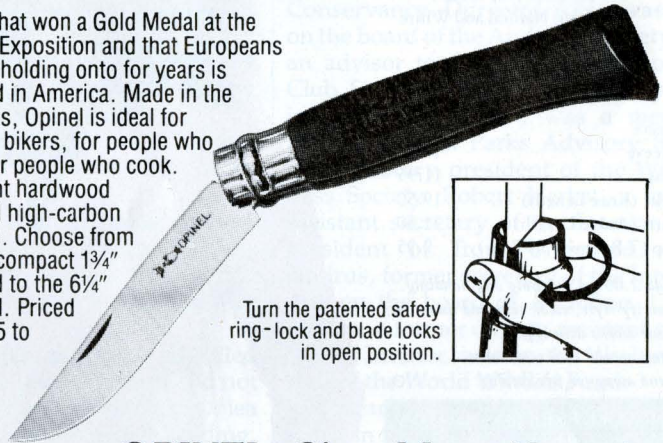
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director of the Park Service.

Working closely with Yellowstone bear managers to deflect criticism from government grizzly policy, the National Audubon Society lobbied hard for congressional support of Interior bear management. "Audubon's policy," wrote Audubon President Russell Peterson in 1983, "is to actively encourage the IGBC...."

In January 1983 the IGBST formed the ad hoc Committee on Population Analysis. This effort, one of its members explained to me, was "a quick and dirty way to get a handle on the grizzly numbers."

The committee made no attempt to compare population trends before dump closure with those following it. Such a procedure, of course, would have shown that grizzly decline did not begin until 1968. Rather, it compared the 1959 and 1980 populations, concluding that, as the later number was smaller, "the trend from 1959 to 1980 indicates a significant decline." Thus the fact that the decline only came after dump closure did not appear in the findings.

Even more surprising, the committee concluded that the number of grizzlies had not declined since 1974. "No significant trend," it reported in a May 1983 press release, "is indicated for 1974–1980." This conclusion was in error, of course, and University of Montana scientists informed the committee of this error soon after the findings were announced. But it was not until December that the IGBC publicly conceded the error. "Population Trend should be changed from 'No significant trend is indicated for 1974–80,'" noted the erratum, "to 'A significant downward trend is indicated for 1974–80.'"

In February 1983 Interior created another ad hoc committee, this one to consider supplemental feeding and to be chaired by Knight John Craighead was asked to join as well — the first such invitation he had received in a decade.

The committee's report confirmed that since the dump closures the grizzly had suffered from lack of food. "The nutritional level of the population may be lower at present," the committee observed, "than when bears were feeding in garbage dumps.... It seems apparent that those captured during the 1959–70 period averaged larger and heavier than those captured during the 1975–82 period."

The committee also recognized the value of ecocenters in concentrating bears in the park. Annual man-caused bear mortalities in the dump era had risen, it noted, from 4.18 to 7.8 today, largely because bears were wandering more. "Supplemental feeding," it estimated, "concentrates on population in

time and space and this can be highly protective."

Nevertheless, the committee refused to recommend supplemental feeding. Killing elk to feed bear, it observed, "would mean cutting the present herd (now more than 30,000 animals) approximately in half." The committee rejected the idea, concluding that killing the elk would make them "more secretive than at present, seriously damaging their value to park visitors...."

"The population," it concluded, "should be able to sustain itself at the present level of nutrition using natural foods in the environment if human-induced mortality is limited. Therefore, supplemental feeding is not necessary from a nutritional standpoint for the Yellowstone population."

Carefully adding two and two, the committee reached the sum of three. While conceding all the arguments in favor of supplemental feeding, the committee had nevertheless refused to endorse it.

"The supplemental feeding committee was a farce," one official close to the committee deliberations told me. A majority of the committee members, including Servheen, Meagher, and Brown, had long been on record as being opposed to supplemental feeding, and the latter two had stated their opposition early on in the proceedings.

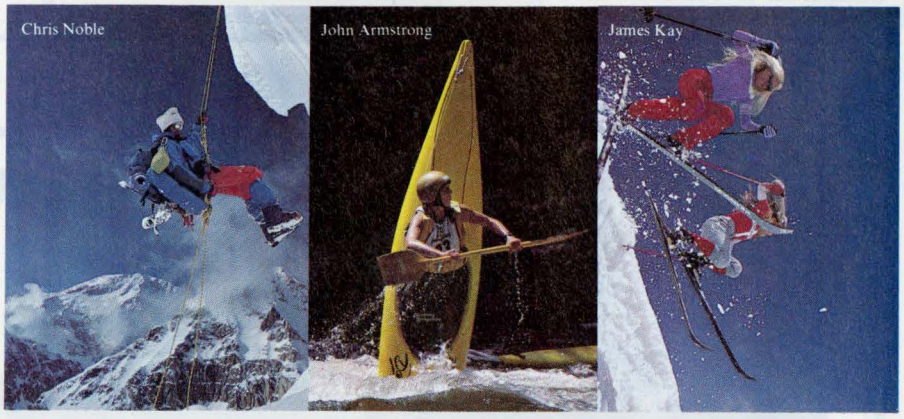
John Craighead, disturbed by the appearance that he had been co-opted, agreed. "The committee did not consider establishing ecocenters seriously," he told me. "I had the choice of quitting or staying on with the hopes that the report would at least contain some meaningful data. I chose the latter. If the public knew bears were stressed nutritionally and were declining, I had hoped it would see the value of ecocenters, no matter what the committee recommended."

The public, however, had little opportunity to make up its mind. Only the report's conclusion made the newspapers, not its supporting data. And the conclusion was quickly embraced by environmentalists. The committee, wrote Hank Fischer, representative of Defenders of Wildlife, "concluded that supplemental feeding is not necessary nutritionally. In short, grizzlies are not starving to death."

"The decline of the grizzly in Yellowstone long pre-dates the dump closures," wrote Audubon's Eno, apparently having relied on the misinformation supplied by the population analysis committee. "The supplemental feeding question is now 12 years after the fact. The dumps are now closed and the Yellowstone grizzly population is now a long way toward adjusting to that fact."

In the fall of 1984 Charles Kay sub-


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mitted an article on the deterioration of bear habitat in Yellowstone to *BioScience*, a publication of the Institute of Biological Sciences. Anxious that his work be reviewed by disinterested scholars, he asked the editor that it not be refereed by anyone associated with the grizzly controversy. Instead, the editor submitted the work to Park Service biologists Meagher and Servheen. Both recommended against publication, and it was rejected.

"Does this mean," Kay asked me later, "that scholars must have the permission of the Interior Department before they publish?"

With the bothersome issues of population decline, starvation, and habitat destruction settled, bear policy was once again safe from its critics. But as grizzlies wandered out of the park into places where humans killed them, bear managers and environmentalists became increasingly frantic to find ways to keep man and beast apart.

Management continued its aggressive control actions and accelerated efforts to "sanitize" the gateway communities and national forests surrounding the park. The Audubon Society threatened to sue Park County, Montana, if it did not fence the Gardiner dump. Claiming poachers to be a major threat to the bears, the society, in a widely publicized press release in the fall of 1982, also offered a $10,000 reward for information leading to the arrest and conviction of anyone who killed a grizzly illegally.

The northwest section of the Wildlife Society, whose president, Fred Bunnell, had been a member of the ad hoc Committee for Population Analysis, announced that it "supports and encourages the continued efforts of the Interagency Grizzly Bear Committee."

"We feel," reported Greater Yellowstone Coalition President Rick Reese at the group's 1984 meeting, "the federal agencies are at this time pretty well on target; we feel the grizzly bear recovery plan is a document that is workable. And given the proper kind of public support, it will lead to the recovery of the population of grizzly bears in the Greater Yellowstone area." Indeed, he added: "Wild natural food used by grizzlies is available in Yellowstone, and the land does provide the bear with the needed food.... Feeding the bear is not necessary, and we hope it will never become necessary at any point in the future."

As these remarks implied, environmentalists, like their bureaucratic counterparts, refused to listen to biologists. For them the plight of the grizzly was not a scientific problem, but a symbolic wilderness preservation issue.

"We just hope the grizzly can hold out," a member of the Audubon board told me, "until we can secure the habitat."

But it was not clear the grizzlies could hold out.

PART III

## FINAL SOLUTIONS

Now, 9:00 P.M., 8.27.84, I sit at my employee cabin, Lake Station," wrote Frank Phillips, chief of the National Park Service Exhibit Production, and his wife, Elizabeth, to *The Cody* (Wyoming) *Enterprise*. "We heard the report of a large rifle in the Bridge Bay Campground area. Almost every evening large rifle shots are heard in bear habitat. What is going on here?"

"Thursday 8.23.84," their letter continued, "a yearling grizzly strolled by an employee campground near Fishing Bridge. The bear was digging roots and eating dandelions as he ambled by. He also sniffed at some laundry hanging on


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a clothesline, before moving on. Someone called the rangers and within minutes, rangers Gary Brown, Tim Blank, John Osgood, Patricia Murphy, and three other unknown personnel arrived on the scene armed with rifles and shotguns to track the innocent bear down. Is this bear management? . . . If you are serious about the welfare of bears and your national constituency, you will impound all bear traps and ranger firearms. Then, observe the natural return of bears to Yellowstone Park."

Others also began to wonder. "From 1980 through September 1984," reported the Wildlife Committee of the National Park System Advisory Board, "there have been 41 known human-caused grizzly deaths in the Yellowstone region .... In examining these categories of 'causes,' one of the largest ones is 'controlled action' [13 mortalities]. When this source is coupled with research mortalities [six], the most prominent cause of recent mortalities seems to be at the hands of resource managers."

More than a decade after dump closure, managers were still the biggest bear killers, while the bears showed no signs of adjusting to the loss of ecocenters.

By 1983 Cooke City, under pressure from authorities and the Audubon Society, had bear-proofed its dumpsters and installed a chain link fence around its landfill. Once the area was sanitized, the bears moved on. Some traveled to Gardiner. One of these was sow number ten, a Cooke City dump *habitue*, and her three cubs. In May 1983 she was caught in a snare at the Gardiner dump and transferred to British Columbia. Her cubs were released inside Yellowstone. Less than a month later two of her cubs returned to the dump, where they were again captured. One, caught by the hind foot, became tangled in barbed wire. Suffering a broken foot, it was destroyed by authorities. The other was again released. But one month later it too was killed.

Similar steps were taken to sanitize West Yellowstone. This town, which had had a bear problem ever since the closure of the Rabbit Creek dump near Old Faithful, had finally solved the problem —or so authorities thought—by trucking the garbage to Ennis, 70 miles away. But once the dump was gone, bears began to come into the town and nearby campgrounds more often. One of these bears, number 15, was a boar nicknamed "Dum-Dum."

Dum-Dum was a model bear. Captured at least 15 times by researchers, he was what they called "trap-happy": quite willing to be caught in exchange for food. Often he came to feed at the dumpster at the West Yellowstone air-


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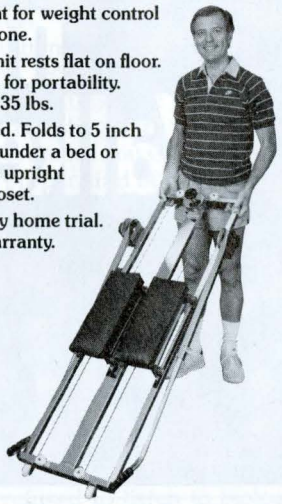
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port. But authorities finally managed, by the end of the summer of 1982, to wean Dum-Dum of this habit by mixing the garbage with ammonia. The next spring, having lost 173 pounds during hibernation, Dum-Dum did not return to the dumpster. Instead, in the early morning hours of June 25, he visited the Rainbow Point Campground, near West Yellowstone. There he ripped open a tent and dragged a young man, William May, from his sleeping bag. When May's body was found the next day—about 200 feet from the tent site — approximately 70 pounds of it had been consumed or lost as fluid.

In August another sow and her cubs wandered into West Yellowstone, where they were trapped. The cubs were transported via helicopter into the park. But the cable holding their trap detached, and the trap, containing the cubs, fell to the ground, killing one of them. The second cub, only a few months' old, was released in the park, alone.

The sow was sent to Professor Charles Jonkel of the University of Montana, for behavioral research, while authorities made plans to kill her. Outraged, West Yellowstone residents pleaded for her life. What, they wondered, had this bear done wrong? The sow, although guilty of wandering through a campground, had not caused any trouble. "Everybody in West Yellowstone is hotter 'n hell about it," said Elizabeth Bailey, owner of the Airport Cafe. "They just kill the mother and dump the cubs. The cubs aren't big enough to fend for themselves."

"We want a stay of execution until they can decide if the bears belong to the people or to the god-dang bureaucracy," said motel owner Walker Cross, also a local. After persistent opposition, the sow's life was spared; she was sent to a zoo in Great Bend, Kansas.

When the 1983 season had ended, six more grizzlies were dead—including three females. All were victims of management control actions.

By 1984 Yellowstone seemed caught in a time warp. History was moving in tight circles, the same events repeating themselves. Reminiscent of the period immediately after the dump closure, grizzlies were everywhere. They came into the campgrounds and were seen in numbers along the roads. More people were mauled, and once again, tragedy struck. On August 1 the body of Brigitta Fredenhagen, a young Swiss woman who had been backpacking alone near White Lake in the park, was found near her campsite, eaten by a bear. Only 40 pounds of her flesh remained.


CIRCLE NO. 126 FOR READER SERVICE

In early August a bear entered the Grant Village campground at night, ripping open the tent of a sleeping 12-year-old boy and mauling him. Also in August, a grizzly attacked a seasonal park naturalist and her husband as they were walking in the Hayden Valley. There were many other, less-publicized close encounters. Trail crews, working in the backcountry, sometimes found themselves chased up a tree by an angry bear.

The bears' aggressiveness made them vulnerable to management control. In July a young male bear died within two weeks of being drugged and trapped by park managers. In August bear number 93, the last surviving cub of number ten, was captured in the Indian Creek Campground in Yellowstone and transported to a zoo. The same month a seven-year-old male, number 88, was captured at Fishing Bridge and killed by authorities. In September sow number 38 was accidentally killed by authorities after a drug reaction. In October a yearling male was trapped by the neck in a snare in West Yellowstone and died. Shortly after, another young male was trapped near the community of Lake and sent to a zoo.

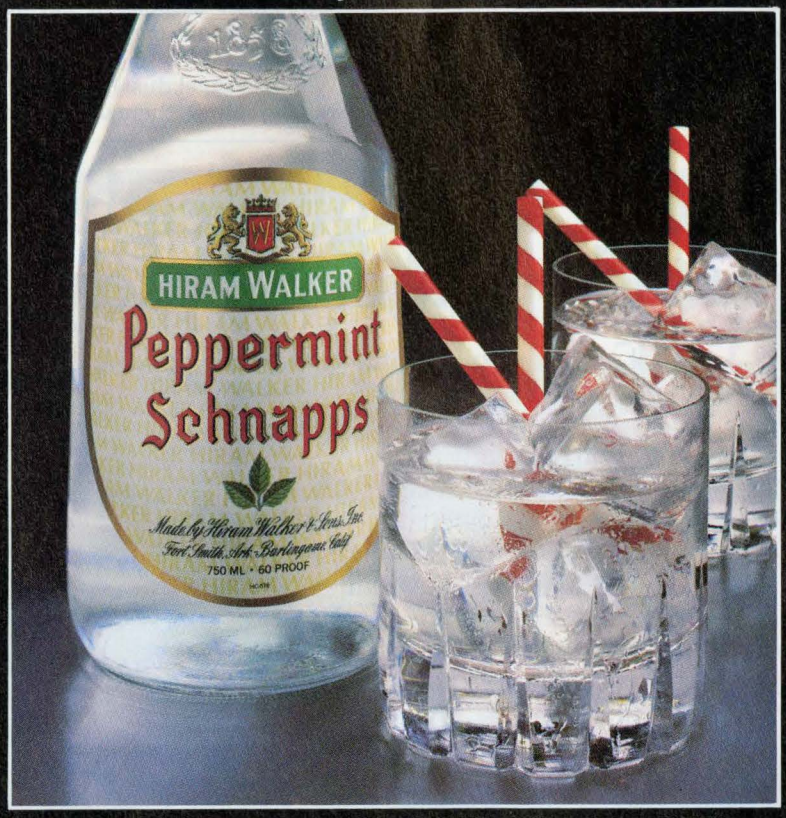
By the end of the summer a human life had been lost and ten bears had died (six while in the custody of management), four of them females.

Yet, as in the 1970s, some bear managers searching for a silver lining to this dark cloud saw the bear activity as a good sign. It showed, Shoshone National Forest Supervisor Steven Mealey told a September 1984 meeting of environmentalists and government officials, that "things are better for bears than ever before." In Yellowstone, Mealey suggested, where vegetation is scarce and elk prolific, the bear, in the past predominantly vegetarian, has become more carnivorous. "The grizzly bear is now back to eating elk," he said. "In 1974 succulent green plants were the main diet, supplemented in the spring by meat. Now meat has become a large diet source."

"If we don't have more bears now," he concluded, "we soon will have." But this, of course, was not happening. While grizzlies did eat winter-killed elk in the spring and bulls weakened by the rut in fall, their overall use of ungulates was very small. Between 1977 and 1981, for instance, a scat analysis found that elk comprised only 5.4 percent of the average yearly grizzly diet. And while during the fall when pine nuts (the grizzly's principal food) had been scarce, consumption of elk had risen above the average for this time of year, there had been a more dramatic decline in carrion consumption in the spring. Indeed,


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most bear managers conceded, the bears were neither increasing in numbers nor enjoying a more robust diet. They were more visible and were encountering humans more frequently, Servheen explained to the *Casper* (Wyoming) *Star-Tribune*, because they were wandering more than usual in search of food. It had been another bad year for "natural foods," Servheen reported, especially for the "whitebark pine nut."

Nevertheless, as the maulings and the bear removals continued, both the public and the authorities became increasingly concerned. After William May's death there had been a growing conviction among many that the grizzly was too aggressive.

Bear number 15 (which killed May), "was one of the most docile bears I ever knew about," noted Bart Schleyer, an IGBST member who had trapped the bear many times. What had caused this change in behavior? "Bears don't do what bear number 15 did, or we would have to kill them all," noted Charles Jonkel, the University of Montana grizzly researcher.

Indeed, noted Jonkel, when bears kill, they usually do so because they've been surprised. They do not, he suggested, kill humans to eat. It could be that "the long series of captures, druggings, and disturbances could have affected his behavior." The bear, noted Jonkel, had been tranquilized many times with sernylan, or "angel dust." Another drug commonly used on grizzlies, M-99, can be as much as 10,000 times more powerful than morphine. Could either of these substances affect bears the way they do humans? Jonkel in fact doubted this thesis, but wanted to study the bear to at least rule it out. But instead, authorities quickly killed the bear. This, Jonkel thought, was irresponsible. "If the authorities get sued over this," he said, "it would not surprise me."

**"WE WANT A STAY OF EXECUTION UNTIL THEY CAN DECIDE IF THE BEARS BELONG TO THE PEOPLE OR TO THE GOD-DANG BUREAUCRACY."**

Others began to suspect that hunger might be encouraging the grizzly to prey on humans. "A grizzly that is having difficulty in normal feeding," said biologist Stephen Herrero in his recent book, *Bear Attacks*, "either because of old age or some other reason, may try to prey on people."

Whether angel dust, M-99, or hunger was the culprit, there was a growing suspicion among some authorities that too much trapping and tranquilizing had hurt the bear and perhaps made him more aggressive. But rather than restrict control actions or research, officials sought more direct ways to counter the bears' apparent boldness. The state of Montana pressed for the right to hunt the animal. Surely, hunters would make the bear afraid of man, the state's spokesman reasoned. "I think we could solve our grizzly bear problem if we could hunt two or three a year," noted Don Bianchi, public information officer for the Montana State Department of Fish, Wildlife, and Parks.

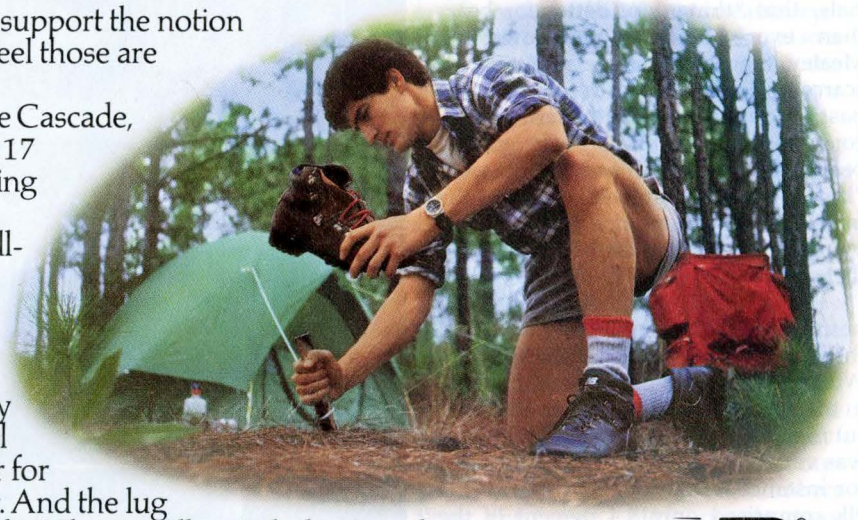
The IGBC, however, had other ideas. Perhaps, its members thought, the bear could be taught to get along with humans. The committee would embark on a program of behavior modification! At a secret IGBC meeting during the fall of 1984 a series of 'aversion' experiments was proposed. If bears could be made to associate bad experiences


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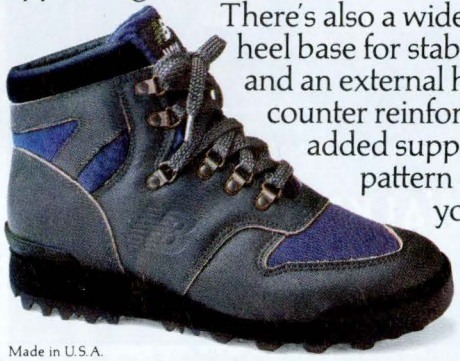
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with humans, it was theorized, they would avoid such encounters. Bears would be "trained" with nonlethal weapons: rubber bullets, electrical shocks, and various types of repellents. Knight opposed the idea. Tormenting bears, he felt, was inappropriate science. The IGBC gave the project to the Wyoming Department of Game and Fish. By 1985 the program was off and running. "What we are looking for is a nonlethal means that will keep bears out of camps and away from people," reported Dale Strickland, assistant chief game warden and supervisor of the program. Soon the IGBC received the support of environmentalists. "Research on aversive conditioning of bears," stated a 1985 Greater Yellowstone Coalition position statement, "should continue."

Despite attempts to keep man and bear apart, wildlife managers are driving them together. Despite a desire not to interfere with nature, they are trying to change the behavior of the bear, by using helicopters, angel dust, propane cannons, rubber bullets, and electric shocks. Despite a desire not to play God, they are playing God. And nothing they do seems to reverse the decline of the bears. The black bear, nearly forgotten, has all but vanished from Yellowstone. Researchers can find only one-quarter as many blacks as grizzlies. And during the summer of 1985 another 13 grizzlies—five of them female—died.

Indeed, some are beginning to wonder: Could it already be too late to save the grizzly? In a recent article in the *Wildlife Society Bulletin,* University of Wyoming researchers theorized that—assuming our best estimates of current mortality — a minimum viable grizzly population in Yellowstone would be about 125 animals. Yet if the government's calculations of the grizzly population size are even a little off, the number of grizzlies may already be less than that. Had the decimation of the population in the 1970s brought the number of bears below the threshold?

Some longtime NPS officials, closely associated with policies, told me privately they now fear the worst.

"When Dick Knight told me, in 1980, that in five years he had been able to find only 46 bears," one senior official told me, "I suddenly realized we had been had."

"It will continue to haunt me," one retired official told me, "'till death does us apart."

Yet, I suspect, we *can* still save the grizzly. The difficulties are not biological but political. Saving the bear requires, to be sure, preserving the habitat around the park, as environmental groups such as the GYC are trying to do. But it also demands that the government take some new and bold steps: It should replace the IGBST, as the National Academy of Sciences recommended, with a nongovernmental research body, which should immediately begin conducting intensive studies to determine whether this region can sustain a "natural" grizzly population; it should end trapping, transplanting, drugging; it should prohibit the killing of bears by *anyone,* including management (except in the most extreme circumstances); and it should re-establish ecocenters immediately, on an experimental basis.

Given political realities, such boldness seems unlikely. Instead, the juggernaut rolls on. As an alliance (with a growing budget) of game officials from three states, land and wildlife managers from the departments of Interior and Agriculture, and environmental organizations that have established a revolving door with the government, the juggernaut has, perhaps, picked up too much momentum to stop. ○

*Alston Chase's book,* Playing God in Yellowstone: The Destruction of America's First National Park, *will be published in March by Atlantic Monthly Press.*


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## Outsider of the Year

*Continued from page 41*

around the block with me, so I could see how he does it. He laughed and said, "No way. I've had enough running for a while."

For now Fonyo is free of cancer, but he faces a lifetime of checkups every six months. As his doctor, David Chan, warns, there is about a 10 percent chance that the cancer could recur.

In the crowd that had greeted him when he ran into Calgary in April, Fonyo caught sight of a beautiful young woman who he thought was a reporter. The shy kid who had never had a serious girlfriend got up the nerve to ask the woman for a date. She turned out to be not a reporter, but a recent high-school graduate living near Calgary. The romance blossomed — in the full glare of the media. In July Fonyo moved to Calgary to live with his girlfriend, renting the apartment where I was visiting him. Things seemed to go well until September, when Fonyo discovered that there was another man and asked his girlfriend to leave.

Fonyo spoke of the experience with a studied detachment, but it was obvious that he had been devastated by it. His sister, Suzanne, would later tell me: "This may not stay with him the rest of his life, but he's not the type to forgive and forget easily."

Fonyo admitted that he was at loose ends in Calgary. He lives with a daily paradox: He is so famous that he cannot walk to the grocery store without being recognized by strangers who honk their horns or shout congratulations. Yet he has almost no friends in Calgary. Public-appearance fees are his main source of income, and his schedule rivals those of the most sought-after politicos or TV stars, but I was pleased to find that the talk circuit had not gone to his head. "It's very educational," he told me wryly. "The people you meet tend to be big shots. We make a few speeches, and then everybody goes home."

I could not, however, mistake a visceral restlessness. One article after another has carried the testimony of family, friends, and admirers that his run across Canada has had a profoundly maturing impact on Steve Fonyo. No doubt this is true, but it was clear to me that the future hung ambiguous over him. Could he ever again do anything to equal the achievement of his twentieth year?

"It helps that people recognize me everywhere I go," he said. "Because if it stopped all of a sudden, it would be a shock. But it won't last forever. People will eventually forget about the run."

So much for fickle fame. After I left Calgary, it occurred to me that a far more important thing than celebrity had happened to Steve Fonyo on his endless highway. At 14 the pudgy kid had been ashamed of his missing leg. Once an avid water skier, he had learned to avoid swimming pools. As he trained for his journey on the roads near Vernon he had run in the dark to escape detection.

For the first few weeks of his run he had worn long pants every day. Finally, in Nova Scotia, with the weather getting hot, he had switched to shorts. His father considered that the most important step of the whole pilgrimage. In a recent Canadian Broadcasting Company documentary about Fonyo the camera records his visit to a grammar school. As he talks to a class, a girl breathlessly blurts out, "Can I see your leg?" "Sure," says Fonyo. He rolls up his pant leg, props the metal prosthesis on top of her desk, and smiles as she stares at it, goggle-eyed.

You can't buy that kind of self-acceptance for $11 million. ◻

*David Roberts is a contributing editor of* Outside. *A selection from his mountain writings will be published by The Mountaineers later this year.*


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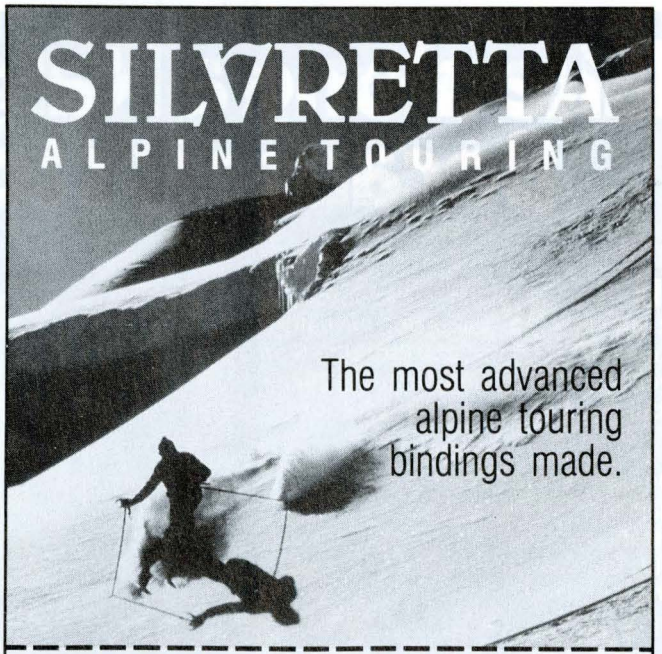
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Outside

# Rocky Mountain Refuge

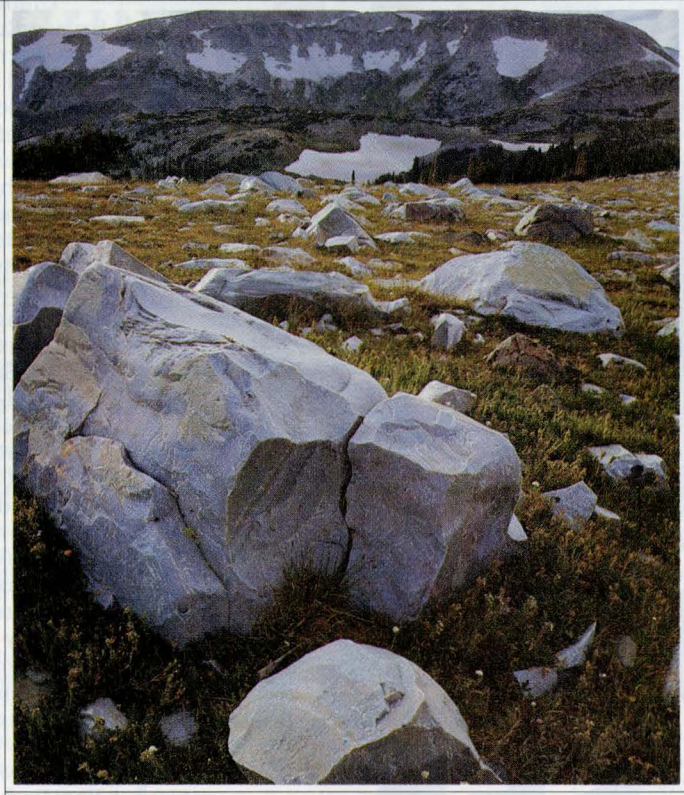
## *Wyoming's undiscovered Medicine Bow backcountry*

By Scott Thybony

When seen from the Laramie Plains, the Medicine Bow Mountains stretch along the Wyoming horizon like a long blue shadow. The Cheyenne called this the blue vision. The distant high country was a place of mystery to them and a source of rough-and-tumble adventure and occasional profit for mountain men, lumberjacks, and assorted high-plains drifters. Although much has changed since Kit Carson was treed by a grizzly while trapping in the Medicine Bows, the range still has plenty of untamed wilderness. This time of year it's most accessible by ski.

Highway 130 heads west into the heart of the mountains through the old mining town of Centennial. Having survived gold booms, logging booms, and railroad booms, Centennial sits quietly at the foot of the mountains waiting for the next wave to roll through. At one store in town it is still possible to gas up, have a beer, buy groceries, and get a bowl of buffalo stew, all in one building. For entertainment you can watch from the store's front porch as drivers brake when they spot the town's only "police car" — an immobile junker painted as a decoy.

Beyond Centennial the road climbs a winding grade through thickly timbered slopes that provide winter grazing for mule deer and elk. During the winter the road is plowed only a short distance past the Snowy Range Ski Area. Where the plowed road ends the Barber Lake Cross-Country Ski Trail begins, skirting the ski resort to the south and ending up four miles downhill at the Libby Creek Recreation Area. Although several stretches of the trail demand intermediate or even expert skill, they can all be bypassed by taking the fork in the main trail. Skiers can leave a car at the bottom and shuttle back to the top. Just a few miles beyond Libby Creek are six and a half miles of groomed track maintained by the University of Wyoming Nordic Ski Team.



DAVID MUENCH

*Mountains on top of mountains: the Medicine Bows' Snowy Range*

On the west slopes of the range Highway 130 is kept clear of snow as far as Ryan Park, another trailhead for cross-country skiers. More than 20 miles of easy beginner's routes wind through thick lodgepole pine and spruce forest. Above timber line the marked trails are usually buried by snow, although a few cairns may be visible. The conditions on the crest of the Medicine Bows are harsh and rugged: Skiers who venture into the area should know how to deal with wind, cold, and possible winter bivouacs.

An official hut system hasn't been established in the Medicine Bows, but there are so many abandoned miners' cabins throughout the range that a skier can easily strike off on his own and find one. The most accessible shelter can be found on the Middle Fork of the Little Laramie River west of Centennial Ridge. Ski in nine miles on the old mining road past the forest ranger station on the Snowy Range Highway. You'll pass several cabin ruins before you reach the log home on the river that was painstakingly and intricately notched by a Scandinavian lumberjack. Local skiers have left emergency food and Ensolite pads in the cabin, as well as an ax and a supply of wood.

THE MOST SPECTACULAR SECTION of the Medicine Bows is the Snowy Range, which runs along its crest—a range atop a range. Thrusting more than a thousand feet above an intricate mosaic of alpine lakes and meadows, the great stone wall dominates the horizon for miles.

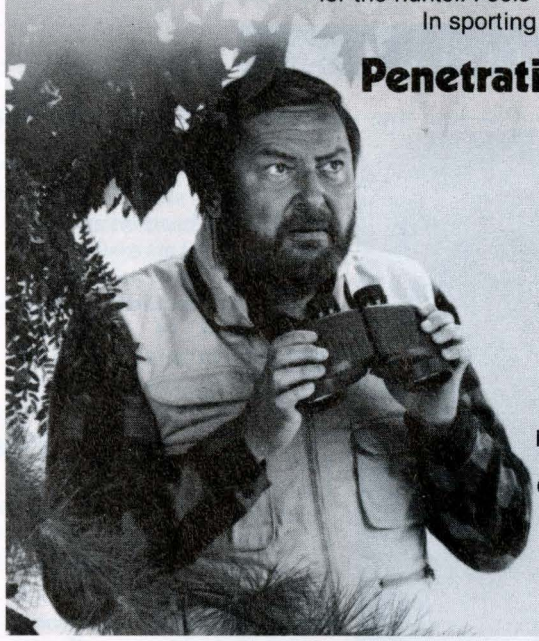
Good snow conditions usually last longer in the Medicine Bows than in the Colorado Front Range to the south, but at times the winds can become violent, especially on the summits. On one midwinter trip the wind blew so constantly that I didn't notice I was skiing with a permanent list until I reached a wind eddy behind a boulder and took a fall because I was leaning so hard.

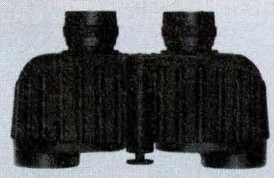
After the snow plows break through the 10- to 20-foot drifts along the highway on Memorial Day (notorious 30-foot drifts along Interstate 80 have inspired truckers to call it the Ho Chi Minh Trail), a caravan of cars competes to be the first over the mountains. As the high country opens early-season hikers contend with having to make postholes through soft snow banks and ford streams flooded by snowmelt. Conditions at this time of year are tiring at best, and

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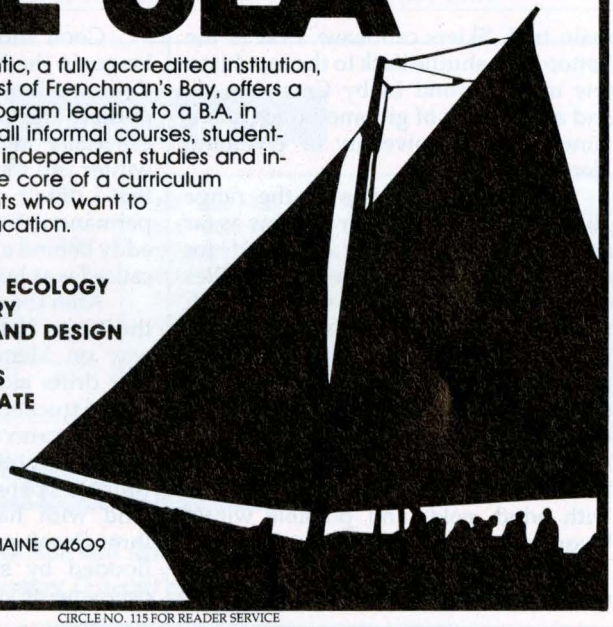
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can be dangerous. By mid-July the high country is clear of snow.

THE NORTH PLATTE RIVER CUTS ALONG the base of the Medicine Bows to the west. River runners often float the entire length of the range from a point near the town of Walden, Colorado, to Fort Steele, Wyoming—a good five-day trip, even in April when the river swells with runoff. Boaters also head for a short stretch of the North Platte between the state line and Six-Mile Gap, a Class III tumble through North Gate Canyon.

Draining into North Gate Canyon is Savage Run Creek, now protected by a 14,000-acre wilderness area. The Savage Run Trail winds for nine miles through steep-sided canyons and virgin stands of timber before reaching open meadows at the higher elevations.

Farther down the North Platte, at the southern end of the Medicine Bows, are Saratoga and the historic town of Encampment, reportedly the scene of an early fur-trapper rendezvous. Both are good staging areas for trips into the Brush Creek and Douglas Creek areas, and the Saratoga hot springs are a relaxing wind-down after skiing. The Douglas Creek Trail makes an especially good overnight ski trip. The nine-and-a-half-mile trail varies 700 feet in elevation through dense pine forest and occasional open sagebrush slopes that offer glimpses of the North Platte River below. Access to the trail is another nine-mile ski down Forest Service Road 878 off Highway 230; the trail ends at the Pike Pole Campground, which in winter is 18 miles from the nearest plowed road. Better to ski out and back.

ONE WARM WINTER DAY ON MEDICINE Bow Peak, the highest peak in the range, I found a marmot far above its normal range sitting on the edge of a cliff. His tracks indicated that he had walked from some distance below. He seemed to be enjoying the view of endless mountains and plains as he looked out across a landscape that was just beginning to shake off winter. There was no other reason for him to be there, but that was reason enough.

## Travel Information

Information on cross-country skiing, hiking, and climbing in the Medicine Bow Mountains can be obtained from the Medicine Bow National Forest, 605 Skyline Dr., Laramie, Wyo. 82070; (307) 745-8971. The Medicine Bow Lodge, Box 16, Saratoga, Wyo. 82331, (307) 326-5439, books float trips on the North Platte River. ◻

*Scott Thybony is the author of* The Medicine Bows: Wyoming's Mountain Country.

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ESD

*Choosing the right exercise machine*

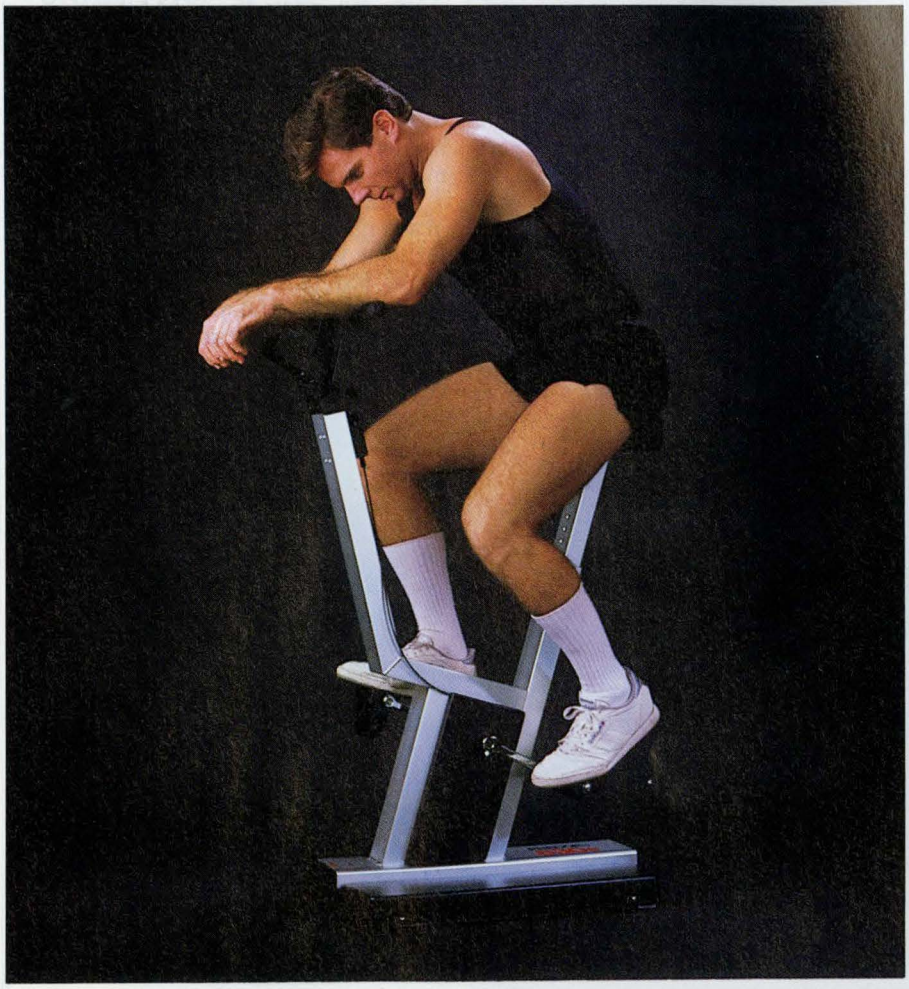
# HOME GYMS

*By Gretchen Reynolds*

No one really *needs* a home gym. People became dauntingly fit and well muscled long before they owned home rowers, weight machines, or computerized pogo sticks. How many kayakers over the years have brooded about underdeveloped shoulders? How many cyclists have worried about puny calves and thighs?

Still, home gyms have their place, especially now, as winds whistle, birds shiver, and skies the color of unwashed laundry spit snow. If, like me, you're demoralized by foul weather, a home gym can be a worthwhile investment.

Good equipment, however, is not cheap. A single machine for a spartan but adequate home gym costs $500 to $800. It would cost three or four times as much to create a place Arnold Schwarzenegger would deign to use. You could join a health club, but membership might cost as much as a home gym. You won't get the camaraderie of the health club, but you won't have to wait in line to use the machines either.



PHOTOGRAPHS BY LARRY EVANS

Buying an exercise machine is an investment, and to invest wisely, consider your needs. Rowers and exercise bikes offer more aerobic benefits than they do strength training. Weight machines, on the other hand, build strength—and shapely muscles—but usually not endurance. Many weight units are also, well, weighty. If you live in an apartment, check with the building supervisor to see if your floors can withstand the stress; how embarrassing it would be if your machine became a high-tech chandelier for your downstairs neighbor!

Most important, before you buy any machine, sit on it. People aren't built—or padded—alike, and a seat that's comfortable for me could be torturous for you. There is a wide variety of machines from which to choose. The only way to discover what you want and need is by shopping around. Wear workout clothes and sweat. Then spend. Here are a few other pointers.

## ROWING MACHINES

If you're only able or willing to buy one piece of equipment, make it a rower. Rowers are chic right now, but try one anyway. They're easy to operate, and they provide a full-body workout.

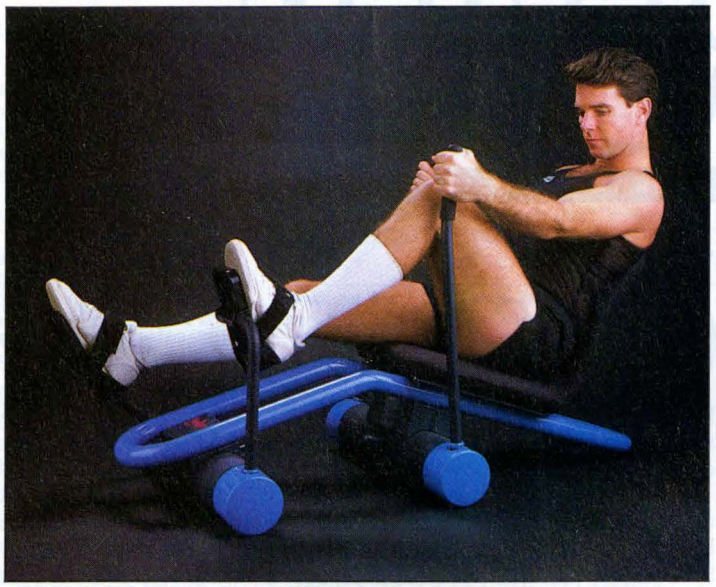
Look for a rower with a comfortable seat and a smooth, quiet, back-and-forth action. It should have rocking footplates for working your calf muscles (and not just your upper leg); swiveling handgrips for working your forearms are nice, but not essential. Well-built machines also have dual shock absorbers and a solid, stable frame. When you yank the rower's arms back, the machine's front end should remain planted.

*Precor 612.* This is a light, inexpensive ($285), well-constructed machine. It's also widely available, turning up even in department stores. Its main problem, though, is its small size: If you're a powerful, enthusiastic rower, it can rear up on you like a spooked horse. In addition, nonstandard-issue people—those who are taller than 6 feet 2, wear a shoe smaller than a woman's size six, or have a bony bottom—will probably find the 612 uncomfortable. For taller people Precor recommends its 620 model ($399).

*Avita.* If you're tall, you may also

## ULTRA-MODERN

*If you have to live with it, you have to look at it. Today's exercise machines are designed with an eye toward form as well as function: the award-winning Proform Aerobot rowing machine (right), for example, or the Precor 830e stationary bicycle (preceding page).*



want to consider Avita rowers, particularly the 850 ($289) and 950 ($325). They're stable, with a smooth, light rowing action, and they come with warranties.

*Precor M6.5.* The top of Precor's rowing line is the decidedly upscale M6.5. Wider, heavier, stabler, and more expensive ($600) than the 612, it comes equipped with an on-board computer that tells you how long, how fast, and how hard you've rowed, and even approximately how many calories you've burned. Few experiences are as uplifting as seeing yesterday's hot-fudge sundae melt away, stroke by stroke.

*Pro Form Contour II.* Although the Contour II features an electronic monitor, it sells for substantially less ($399) than the Precor M6.5. It can't count your calories, but it does have other attractive features, including rotating handgrips, a comfortable seat, and low-slung Velcro footstraps that can anchor the smallest of feet. It and the Contour I (same machine sans computer, $359) are probably the best-*looking* rowers around.

*West Bend 5200.* Appliance giant West Bend has entered the home fitness market with the 5200 Rowing Machine ($350). It's a fine machine, but for some inexplicable reason its stroke counter is built into the frame; every time you slip across it with the seat, it clicks. Not only is this annoying, it's a bit nonsensical: Because the machine counts your movement back *and* forth as two separate strokes, you have to divide the total on the digital display by two to get the actual number of strokes.

*Concept II.* Although all of the previous machines elevate your heart rate, none lets you really mimic the motions of pure rowing. If you're serious about sculling, try the Concept II Rowing Ergometer. It's a huge, inelegant but impressive piece of machinery, essentially a large flywheel with a pull chain. Of all the rowers I've tried, this one is the most helpful when it comes to completing a sustained workout (20 minutes or more) simulating real rowing. The Concept II costs $595 and is available only from the manufacturer; (802) 888-4404.

*Pro Form Aerobot.* Perhaps the nicest of all rowers, however, is not a rower at all, but a hybrid: Part rower and part cross-country ski simulator, the Aerobot resembles a futuristic lounge chair. You sit in it and, in effect, march. Amazingly quiet, it's easy to assemble, easy to operate, easy on your lower back, and easy to look at, if this is important to you. Its award-winning design is reminiscent of ultramodern sculpture. I fell in love with it. For $550 it's also a bargain—not only can you work virtually all your muscles with it, but after a workout, you may want to just collapse in it.

## STATIONARY BICYCLES

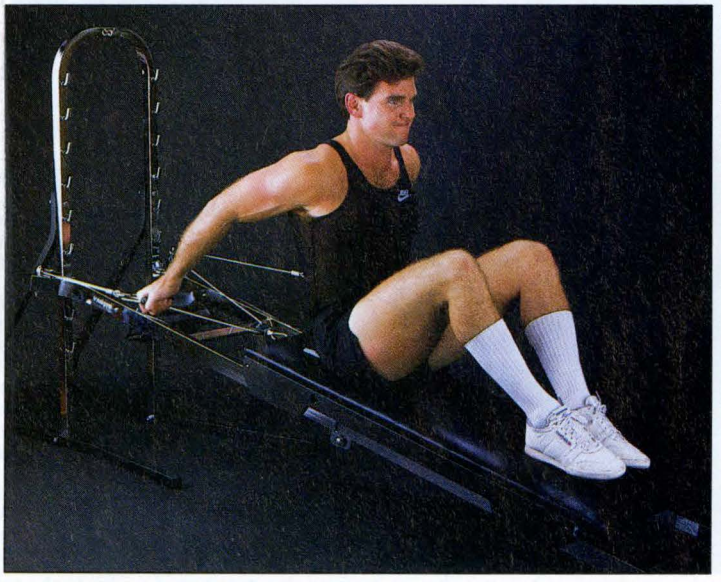
If you'd rather ride than row, today's stationary bicycles are impressive. They have ergometers for measuring your work load, computers for simulating riding conditions, and heart monitors for registering your continued existence. But a stationary bicycle won't strengthen your upper body. If you want a bike *and* muscles, you may want to buy a weight unit as well.

In the past many bikes used brake calipers, which gripped the side of the flywheel, resulting in tension that was often jerky. No more. Now high-quality stationary bikes come equipped with band-style resistance, a belt that encircles the wheel for smoother tension.

*Monark 867.* Monark sells lots of its bikes to health clubs, but its 867 ($595), with its optional racing handlebars, seat, and toe clips (an additional $85), is available to take home. A sturdy, durable, comfortable machine, it is perhaps the best stationary bicycle in its price range.

*Precor 830e.* Precor makes the quietest and best-looking model. Its 830e ($800) has a unique horizontal flywheel; no chains, no belts, but rather a direct drive from pedals to wheel, which makes the bike quiet—and virtually maintenance free.

*Bodyguard 955.* If you're interested in an ergometer that can precisely monitor your work load, look for the Bodyguard 955 ($299). Bodyguard has set the industry standard. Its bicycles are used in exercise physiology labs nationwide, including the one at the Olympic Training Center in Colorado Springs.



## *WEIGHT-LESS*

*Many weight units on the market don't actually use weights, relying instead on spring cams, rubber weight straps, or, as in the case of the West Bend Total Gym Pro (left), an inclining bench on a rolling track and pulleys that use your own body weight to provide resistance.*

Although the 955 has a puny-looking flywheel, it is, in fact, a sturdy, noiseless machine with a very comfortable seat.

## WEIGHT STATIONS

The newest weight units use your own body weight for resistance. You sit on an inclining bench and pull on stirrups to slide yourself up and down the incline, and by setting the bench at a sharper angle, you increase the amount of weight you're pulling.

*West Bend Total Gym Pro.* This was one of the first of such machines. It not only saves wear and tear on your joints, but allows you to practice range-of-motion exercises impossible to do on more traditional weight machines, so you can build strength without sacrificing flexibility. The Total Gym Pro ($495) has nine resistance levels; the Pro Plus ($625) has 11 resistance levels, a squat stand, a weight bar, and a deluxe leg cuff.

*Precor 720 Incline Exerciser.* Although it is similar to the Total Gym, the 720 Incline Exerciser ($500), is even more comfortable, with a well-padded bench and handgrips that won't slip no matter how much you sweat.

*Marcy EM/1.* If you are more traditionally minded, you may prefer a multistation weight unit such as the EM/1 ($559 to $599). You don't need an advanced engineering degree to change the unit from a bench press to an arm curl machine. You don't even have to pull out a pin to change its weights; simply slide a lever down. It has a 220-pound weight limit, but you can buy more weights to increase the limit to 320 pounds. The entire well-padded unit is compact enough to fit in almost any apartment.

*Lean Machine Pro.* This machine ($695) has a 200-pound limit and converts easily into six stations that can be used for 45 different exercises. It doesn't use real weights for resistance, relying instead on spring cams. Although it's probably as sturdy as the Marcy, it just doesn't *feel* like it, and I found myself pumping on it almost gingerly.

*Soloflex.* I preferred the Lean Machine to the comparable Soloflex ($725). The Soloflex uses rubber weight-straps instead of weights or cams to provide resistance. My elbow joints ached after using it, and I've heard similar complaints from other users. Moreover, though it's advertised everywhere, you can't try it out before you buy it; you have to order it sight unseen from the manufacturer; (800) 547-8802. ◻

*Gretchen Reynolds is an associate editor of* Superfit *magazine.*

*Buying Right*

# HIGH-TECH GLOVES




A bitter wind buffeted us as we crested the West Buttress of Denali at 16,000 feet. We needed a campsite fast. I took off my thin polypropylene gloves and pulled on Gore-Tex-and-Thinsulate gloves instead of mittens and went to work digging out platforms and erecting tents in the sub-zero gusts. For the added dexterity the gloves allowed, I expected to pay the price in cold fingers. Surprisingly, my hands stayed warm, and in record time we were snug inside our tents, stoves roaring. From then on I was sold on high-tech gloves.

When your hands are cold, it's hard to think about much else, so it's little wonder that gloves made out of high-tech materials are hot sellers, despite their $35 to $50 price tags. They keep your hands warm without being bulky and ungainly.

The best gloves have seamless Gore-Tex inserts between their nylon shells and insulation, reinforced palms, and well-stitched seams. Fiberfill insulations such as Hollofil make for flexible, breathable gloves; versions from Kombi and Gordini are very comfortable, the latter especially so. Pile insulation dries quickly and is as warm and comfortable as fiberfill, but it doesn't seem to wear as long: Of the pile-insulation gloves tested, I found Grandoe's polypropylene pile the best. Thinsulate, while a bit stiffer, gives the most tactile grip because it's the least bulky. I've also found it to wear the longest, and it insulates well when squeezed around a ski pole or ice ax. I liked the all-Thinsulate (they use Thinsulate all the way around the fingers instead of part way) gloves from Gates for climbing, nordic skiing, and other hard-use activities.

Such options allow you to match your gloves to the weather. Gloves warm enough for lift skiing when it's 15 degrees Fahrenheit may make you sweat when it's 30 degrees and you're cross-country skiing. The Gates XC is a thin and very flexible glove, which is made of nylon, Gore-Tex, and Thinsulate. The most versatile gloves come from Grandoe; in milder weather or for strenuous activity you can remove the liners, leaving a barely insulated Gore-Tex shell. The removable liner also makes the glove easier to dry.

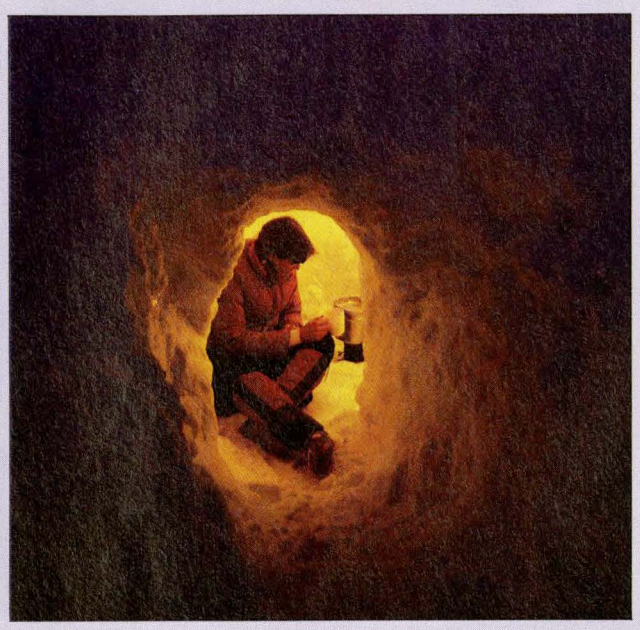
Look for precurved (they're shaped like your hand), box-constructed (they trap more dead air) fingers, but the real fitting test is to try on the gloves. They should slide on fairly easily; if they're too snug, they'll hinder circulation and guarantee cold digits. Make a fist: Gloves do soften with wear, but the more resistance you feel, the more tired and cold your hands will become as your grip works against the glove. Ideally, the glove should fit freely, but with your fingers reaching exactly to the end of the glove's fingers. When in doubt, choose the roomier size.

Like any piece of gear, high-tech gloves will undoubtedly wear down faster than you'd like. Synthetic insulations mat with use — even Thinsulate, after a month's hard wear, loses one-third of its original thickness, though not quite that much insulation value. Less excusable, however, are seams that pop. Don't hesitate to return gloves with faulty seams. Still, as an ice-climbing partner (who long endured cold hands) told me after blowing a seam two months into $45 gloves, "Hell, they've been worth it already."

**—Andy Selters**

*How It's Done*

# SNOW CAVES



I'm one of those people who can't sleep soundly in a flapping tent. A snow cave is no warmer or drier than a good tent, but it's much roomier and quieter. You don't have to worry about spilling soup in it or melting the nylon tent canopy while cooking. And during a blizzard sleeping in a snow cave is like huddling in the storm cellar while all of Kansas flies over the rainbow. You can carry a heavy four-season tent, or you can carry a collapsible plastic or aluminum shovel. The choice is yours.

Digging a snow cave requires almost no skill, but planning helps. If you have good weather, plan to pitch camp at least an hour before dark; digging is easier when you can see what you're doing. Choose a site in the lee of a ridgeline or in a deep drift downwind from a rock outcrop. The rock will shelter you from the wind and from avalanches, although it may limit the depth of your cave. You obviously don't want to sleep beneath a cornice or in an avalanche chute. If you have no choice but to dig in hazardous terrain, it makes sense to dig small, separate caves, spaced well apart; some experienced snow cave campers leave their avalanche beepers on all night.

To start a small one- or two-person cave, dig a tunnel at a downward angle; make sure the entrance hole is just big enough for your body. Six feet in, it should make a right-angle turn to block the wind before hollowing out into a sleeping chamber. The sleeping chamber will have a kitchen shelf, a sleeping shelf, and a footwell, where the coldest, densest air will sink at night. Make the kitchen shelf big enough for your stove and your pots and use a ski pole to poke a hole or two in the ceiling that will vent off the carbon monoxide from the stove. You'll want to make the sleeping shelf at least a foot longer and wider than your sleeping bag so meltwater from the walls won't dampen the bag.

With the stove going full blast, the temperature inside the cave can reach 50 degrees Fahrenheit, which will make the walls and ceiling weep. Within a few minutes after you turn off the stove, however, the walls will freeze solid. The air temperature inside isn't likely to drop below 20 degrees overnight, but you'll want to put your drinking water and your boots in plastic bags and take them into your sleeping bag with you to keep them from freezing. (I like to boil meltwater, pour it into a jug, wrap that in a down vest, and use it as a hot water bottle.) Once you've settled in, close off the entry corridor by stacking your packs in the door.

For three or more campers dig a five- or six-foot trench across the slope—its bottom will be your footwell. Straight into the hill, dig a sleeping shelf that is deep enough for you to sleep with your feet at its far end. The kitchen shelf will be on the other side of the footwell. Extend one end of the trench around a corner as an entryway; stretch a tarp over the open trench, using skis as ceiling beams; and cover the edges of the tarp with snow to seal out the wind.

You can dig an emergency cave in less than ten minutes. A comfortable two-person cave may take half an hour, a four-bag cave an hour. Remember that a small space is easier to keep warm than a large one. And be sure to keep your shovel in the cave: Even a moderate storm can drift over your entry hole, and you'll have to dig your way out.

**—Seth Masia**

*Monster Maul*

# QUICK SPLITS

The hardest part of heating with wood is splitting the pieces small enough to shove through the stove door. A gas-powered hydraulic log splitter costs more than several seasons of commercial home-heating fuel. So until recently I knew of no alternative to the sledgehammer and wedge, crude tools that require the hand-eye coordination of a par golfer. (If you don't hit the wedge exactly right, the vibration going up the handle of the sledgehammer feels like 110 volts, or the wedge flies into the neighbor's yard, or the sledgehammer's shaft snaps over the wedge.) Wedges, furthermore, are notorious for burrowing deep into the wood without splitting it, requiring other wedges to extricate them. Some big rounds take 20 minutes to split—if they'll split at all.

Anyway, I recently discovered the Monster Maul, a bright orange maul (a cross between an ax and a sledgehammer) with a 12-pound, wedge-shaped steel head welded onto a steel handle. Most wedges and ax blades are tapered and thin, and while mauls in general have more obtuse blades, the head of the Monster Maul is as pointed and triangular as a wedge of cheese. Instead of slicing into the wood, it blows it apart. Two swings exploded my old chopping block, a three-foot length of gnarled piñon, 35 inches in diameter, that had repulsed many seasons of battery by ax and wedge. The Monster Maul weighs 16 pounds and takes some strength to raise into a swinging position over your



TOM BEAN

head (an 11-pound Lady's Model is also available), but little force is needed to bring it down; the tool's weight and the laws of physics make it split more efficiently than an ax or a wedge and sledgehammer. I find now that I can split a

# REVIEW

day's supply of wood in minutes.

*The Monster Maul costs $25, including delivery, the Lady's Model costs $22. An optional rubber grip is $3. From Stoz Corporation, 13683 N. Station Rd., Columbia, Ohio 44028.* **—Gordon Wiltsie**

*New Nordic Norm Binding*

## SKI SYSTEM

Even the most wild-eyed cross-country gearheads have become blasé about integral boot/binding systems. So when yet another system appeared last spring, reaction ranged from cynical so-whats to loud yawns. But after on-snow testing, it's clear that the latest entry, the New



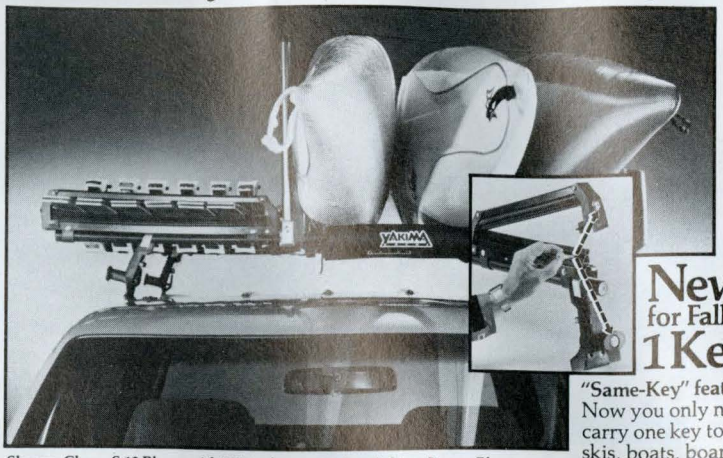

Nordic Norm, has promise, particulary for racers.

NNN is the Norwegian ski industry's answer to the popular boot/binding systems that have recently come into the market, among them the Salomon Nordic, the Contact, the Alpina Control, and the Artex-Landsem systems. Developed by binding manufacturer Rottefella in conjunction with bootmaker Alfa, NNN differs from other systems in the shape and length of the boot's toepiece.

Most systems feature a boot with an extended toepiece that locks into a binding mounted several millimeters ahead of the ski's balance point. The NNN toepiece has an inset metal bar; the binding snaps tightly over it. The good news for racers is that because of the shortened toepiece, the juncture of toe and binding falls directly over the balance point, which means that more energy can be directed onto the stiffest part of the ski to maximize thrust, as when skating. Because the toe is close to the binding and so tightly set, there is little play between boot and ski. The ski snaps back quickly at the end of each thrust.

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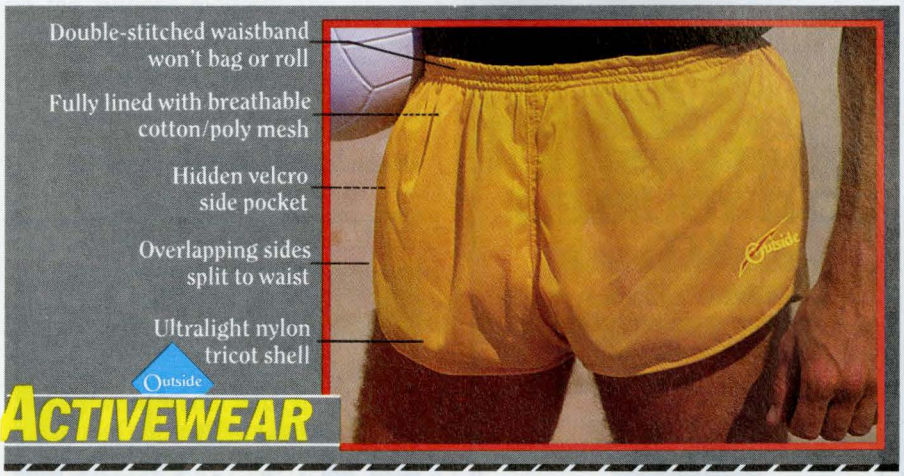
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# REVIEW

closer-to-the-ski feel, thanks to their low heel profile. That and the corresponding grooves and ridges on the boot and foot steering plate make for easy cornering and downhill control. Only Alfa boots for NNN bindings are available in the United States, though there should soon be others on the market.

I wore a Gore-Tex racing boot, the Alfa Oslo, with the system. It supported my foot throughout the skating motion, without caving in when the ski was laid on edge for the final skate thrust. In fact, the support was so good that my first on-track test, a 50-kilometer day, was completed without any foot fatigue. Alfa offers three other boots: the Light Touring model in split-grain leather, the Touring model in full-grain leather, the lined leather racing model, the Calgary.

It's doubtful that NNN will completely take over the systems market, but serious fleet-of-foot skiers should try it and compare. NNN has a racing future. The touring future remains to be seen. Touring boots were not available for testing, and I question whether snow will build up in the binding, making it difficult to step in and out of. We'll have to wait and see.

*The New Nordic Norm binding costs $25. The Alfa Light Touring boot costs $50; the Touring model, $80; the Oslo and Calgary, $100. From Nortur, 3800 Annapolis Lane, Minneapolis, Minn. 55441.*

**—Bob Woodward**

*Geoffrey Norman on*

# BOOKS

## *River Runners of the Grand Canyon*

BY DAVID LAVENDER. UNIVERSITY OF ARIZONA PRESS, $27.50. The Grand Canyon has a hold on the American imagination that no other piece of topography can match. It is as irresistible to the passive souls who take snapshots from above as to those who take to rafts and run the river that carved the canyon.

Today it is a relatively ordinary piece of business to run the Grand Canyon, because technology and experience have made the trip safe if not predictable. It is still exciting, but you don't need to update your will before embarking. Not very long ago, however, if you struck out to run the Grand Canyon, the only certainty was that you would get wet. The first woman to attempt it, Bessie Hyde, is generally thought to have perished there less than fifty years ago, but some question remains.

The melancholy details of that expedition and many others comprise



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the narrative of *River Runners of the Grand Canyon*. The book covers all territory from John Wesley Powell to the present, and it does so with authority. If there is a flaw in the book, it is that the serviceable prose could have used more careful editing. Some judicious pruning could have made the text more riverlike. Still, you should have this one if the canyon holds you in awe.

## *Kilimanjaro The White Roof of Africa*

BY HARALD LANGE. THE MOUNTAINEERS, $24.95. In "The Snows of Kilimanjaro," Ernest Hemingway wrote: "Kilimanjaro is a snow covered mountain 19,710 feet high, and is said to be the highest mountain in Africa. Its western summit is called the Masai 'Ngàje Ngài,' the House of God. Close to the western summit there is the dried and frozen carcass of a leopard. No one has explained what the leopard was seeking at that altitude."

Harald Lange speculates in *Kilimanjaro: The White Roof of Africa* that the leopard was hunting antelope, and he informs us that in 1964, nearly 30 years after Hemingway wrote his story, a pair of climbers came across the skeleton of a one-ton buffalo on a nearly inaccessible ridge near the crest of the mountain. This is a real mystery, according to Lange, and may suggest that erosion had considerably altered the shape of the mountain between the time the buffalo climbed up and the time the climbers discovered its skeleton.

There are items like these throughout the book. Among the high places in the world, Mount Kilimanjaro is special in a way that cannot be entirely explained by mere altitude. It is high, but it is not that high. It can be made into a tough technical climb, but it can also be walked up by an untrained trekker, provided, of course, that he is fit. But Kilimanjaro is in Africa and everything about that continent seems to resonate an extra measure or two in the minds of those interested in the natural world.

Lange's *Kilimanjaro* is a competently written book with fine photographs and illustrations, and it will be fascinating to mountaineers and to those who love Africa, even if only at a distance.

## *White River, Brown Water*

BY ALAN HOLMAN. THE MOUNTAINEERS, $13.95. The great Amazon rain forest is perhaps the most threatened, least understood, and potentially vital of the earth's ecosystems, and it is being plundered at an astonishing rate, according to several writers whose books have come out over the last few years.

One wishes these books well. In their wake comes *White River, Brown Water*. This is not an ecology book, but an adventure book, and the adventure it describes is remarkable. Australian Alan Holman decided one day that he wanted to paddle the length of the Amazon in a kayak, and a couple of years later he simply went out and did it—alone. That in itself is impressive, but even more so is that he did it on money he saved while he was in the Air Force and that he did not invite camera crews along to record the great deed.

Holman is so matter-of-fact about his accomplishment that you wonder if he appreciates its magnitude. He sleeps along the river banks and trades fishing line for eggs in the villages of Indians civilized and uncivilized. The worst thing that happens to him comes near the end of his trip when a peasant boy takes a shot at him from the river bank. Here is how Holman reacts:

> During supper I thought over the day's events and what a fine thread my life was hanging on. Even if I had only been wounded in the incident, my chances of survival would have been very slim. It required considerable effort just to keep a kayak stable under these windy conditions and if I had ended up in the Amazon streaming blood, the death would have been far from pleasant. This incident has taken something from the trip.

The considerable charm of this book is in the author's modesty and sincerity. The Amazon is a long river, and by the time he has reached the end of it, the reader is not tired of Holman's company.

## *Walking the Dead Diamond River*

BY HOWARD HOAGLAND. NORTH POINT PRESS, $10 (SOFTCOVER). There are a lot of people writing about the natural world these days (the less there is of it, the more writers there are writing about it), and one of the best is Edward Hoagland. He is an essayist of the classical sort. He writes to inform and amuse his readers, and he writes about what interests him. The topics of the essays in this collection range from country and city values and whether a New England wilderness still exists to an essay about Vermont dairy farming with the unlikely title, "Of Cows and Cambodia." He doesn't preach and he doesn't shout. If you haven't read any Hoagland before, you can find some of his best writing in *Walking the Dead Diamond River*. This book is guaranteed to stay in your library. —G.N.




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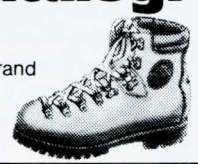
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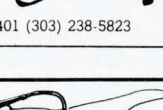


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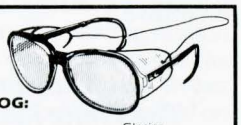
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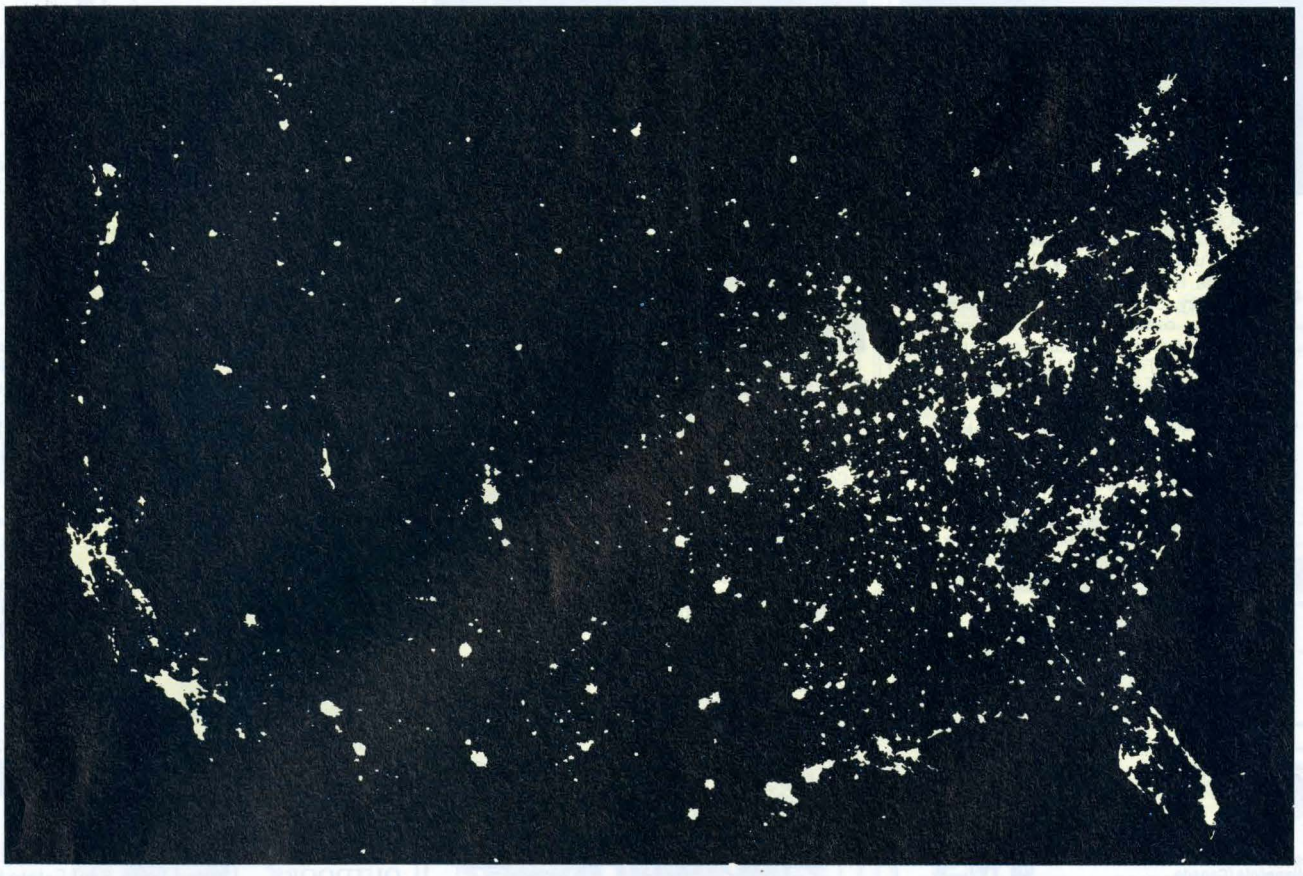
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ASTRONOMY

# BRIGHT LIGHTS, DIM HALLEY'S

Show Fred Schaaf this satellite photograph of the United States at night, and he'll confirm what electric customers may have already suspected: "Our energy dollars are just flying up into space." But, says Schaaf, inefficiency is only part of the problem. His real gripe is astronomical.

As founder of Dark Skies for Comet Halley, Schaaf—along with other group members, mostly fellow astronomers—is attempting to enact legislation requiring a mass reduction of lights during the three brightest months of the return of Halley's Comet, which begins this month throughout the Northern Hemisphere. Otherwise, says Schaaf, light pollution will all but obscure the comet in some U.S. cities and greatly diminish the brightness of the once-in-a-lifetime event in others.

"If you're north of St. Louis, you've got a tremendous problem," Schaaf says.



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*Halley's through a telescope in 1910.*

"There, the comet will be appearing quite low in the sky—where all the light pollution is." Those in cities in the southern part of the country, where the comet will be higher in the sky, should be able to spot it without lowering their lights, although even there, Schaaf is quick to point out, "a light reduction of 5 percent could turn the sight into something really dramatic."

To salvage the event for a public that seems unaware of what they might be missing, Schaaf and his people have embarked on a massive mailing campaign. "Halley's is more than astronomy," he explains, "it's history."

In late fall San Diego was considering a light curfew requiring that lights on billboards and outdoor signs go off at midnight, and the New Jersey legislature, a recommendation for a statewide light dimming program until the end of March, when the comet will leave the skies for another 76.3 years. But don't expect everyone to jump at the Dark Skies plan. Says Lieutenant Tom Fahey, executive officer of the New York City Police Public Information Office: "I don't think that's going to happen in New York. We'd laugh at them. What are you going to do, throw seven-and-a-half million people in jail because they forgot to turn off their lights? New Yorkers are very sophisticated people. If they want to see a comet, they'll watch it on TV."



Left to right: solid tights with swirl top; solid tights with solid top; swirl tights with solid top; striped tights with striped top.

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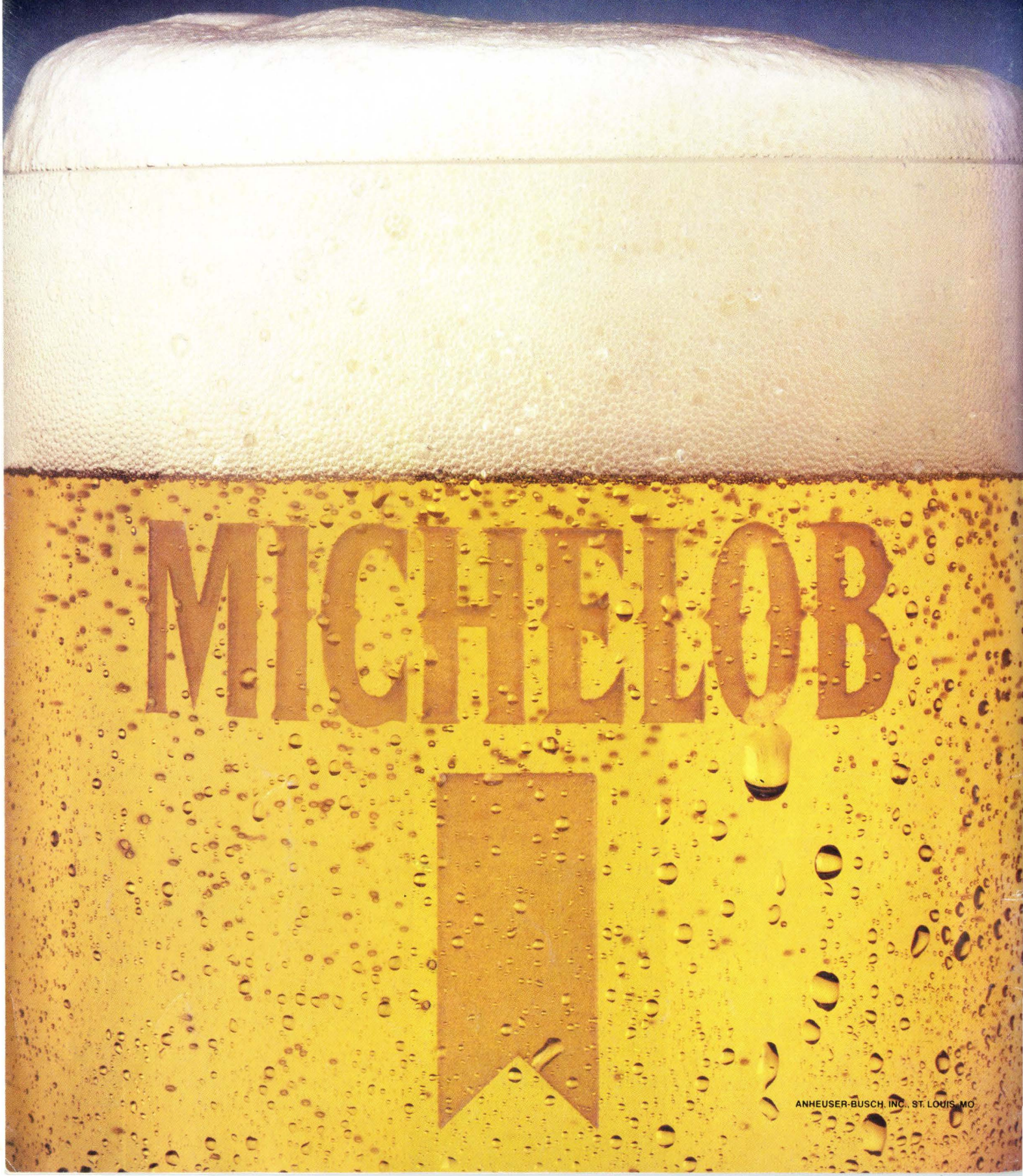
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