Sierra Club Bulletin

July/August 1974

Stripping the Big Sky Country

What to do if your sleeping bag gets wet.

It happens even to the most experienced hikers: The day comes when your sleeping bag ends up wet, maybe sopping.

Now you have a problem—especially if the temperature dips sharply.

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It is important, if not critical, to restore loft as fully and uniformly as possible.

Wring it out and shake it

This is where insulation of Dacron* polyester fiberfill II comes into its own.

"Dacron" fibers absorb less than 1% of the moisture that may collect in your bag. So you can get rid of the worst of it by squeezing it out. Then, to fluff loft into your bag, shake it vigorously.

It's bound to feel damp for awhile, but at least it will provide some insulation.

"Dacron" fiberfill II batting will not shift in a properly constructed and interlined bag. You can tumble wash and dry it.

Low cost a big factor

You'll find "Dacron" fiberfill II now being used in most types of bags. From mummy to king-size. From fluffy lightweights to puffy arctic beauties.

Compare prices and you'll discover another advantage—low cost. Now maybe you can afford two—a bag for summer and one for winter. That's the ideal combination.

For more information and a list of bag manufacturers, write Du Pont, Fiberfill Marketing Division, 308 E. Lancaster Ave., Wynnewood, Pa. 19096.

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Du Pont makes fibers, not sleeping bags.

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Sierra Club Bulletin

JULY-AUGUST 1974 / VOLUME 59 / NUMBER 7

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The layers of earth, the layers of time—by the side of a trail in Zion National Park, photographer Michael Rosen found the signatures of ages written on a tablet of rock. What have the wheels and shovels of mankind to add to such a record?

Founded in 1892, the Sierra Club works in the United States and other countries to restore the quality of the natural environment and to maintain the integrity of ecosystems. Educating the public to understand and support these objectives is a basic part of the club's program. All are invited to participate in its activities, which include programs to "...study, explore, and enjoy wildlands."

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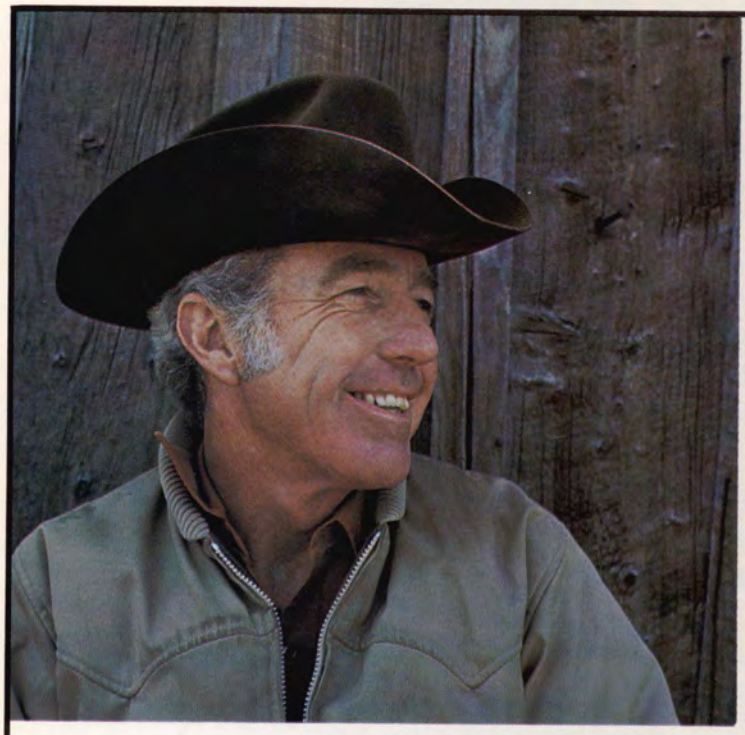
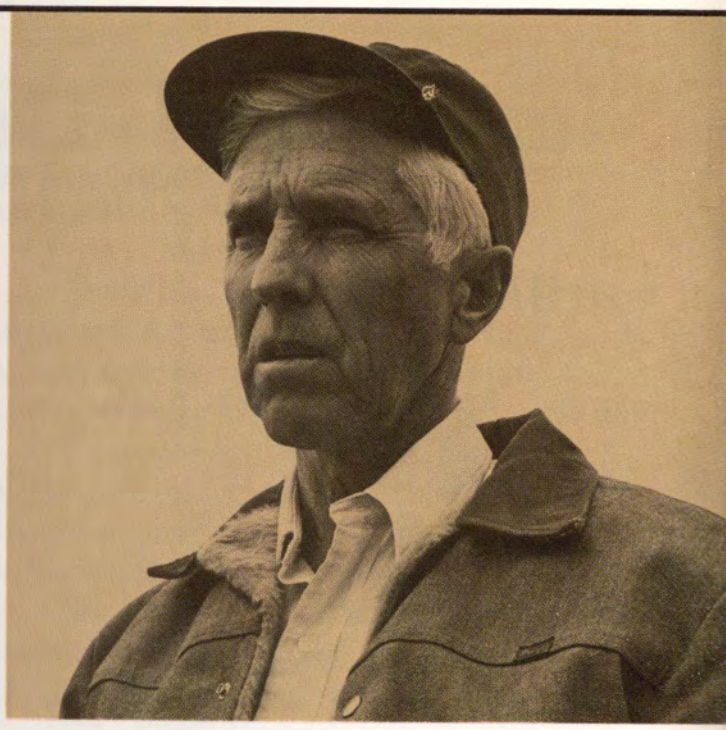
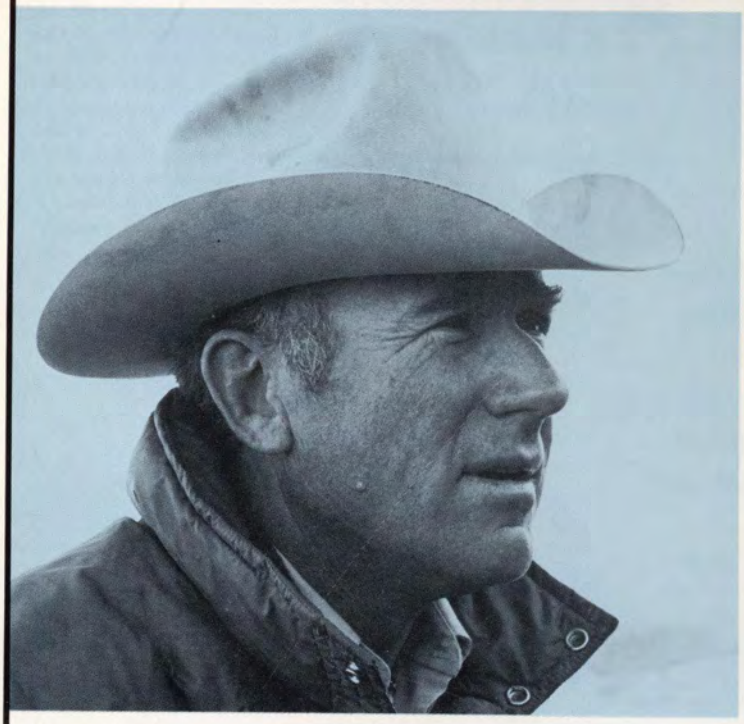
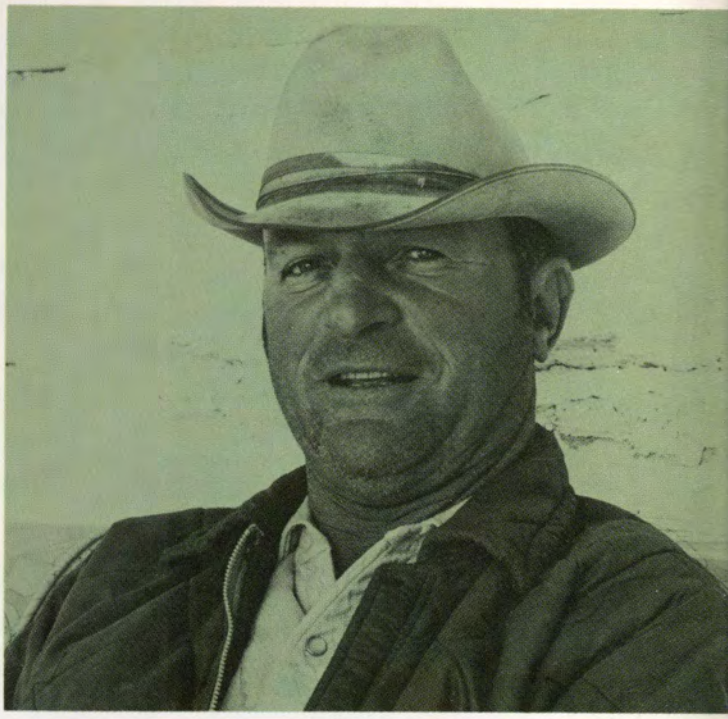








These are men whose lives have been shaped by using the land, not using it up. It is a legacy gained from their fathers and grandfathers, one they hope to pass on to their children and to us, if the twentieth century will let them. Clockwise, from top left: Vern Vivian, whose family came to Wyoming in 1885; Walt Reynolds, whose father came in 1909; Irv Alderson, whose family arrived in southeast Montana in 1886; Bernard Sun, whose Sweetwater River ranch was first homesteaded in 1872.

All photographs for this article by LYNNE BAMA

LANEY HICKS

WHO OWNS THE BIG SKY?

The stripmines of tomorrow are slated to gobble up the rangelands of today–the heritage of three generations of pioneers, the resource of countless Americans yet unborn.

THE NORTHERN PLAINS region—comprising Montana, Nebraska, North Dakota, South Dakota, and Wyoming—stands at a crossroad: its future depends on which path is chosen. The region can either become a coal-mining, utility dump, and gasification center to serve the energy demands of the regions on either side, or it can maintain an economy based on agriculture, and an environment where man and animals alike can continue to thrive.

Those who will be most directly affected by this choice are the local landowners of the region, most of them ranchers, who own between 50 and 85 percent of the rangeland in the coal regions of the Northern Plains. But, for the most part, they do not own the subsurface mineral rights, which have been retained by the federal government or remain in the hands of the railroads as a result of arrangements dating back to the land-grant days.

Last October, Senator Mike Mansfield of Montana described the predicament of the ranchers in a floor speech during the course of debate on S 425, the Surface Mining Reclamation Act of 1973.

"I rise to speak not only about the coal situation in general," Mansfield said, "but also about a minority of the population in the state which I have the honor and the privilege to represent, a minority also in the Dakotas and in the state of Wyoming, a minority which usually votes Republican, a minority which is entitled to consideration, and a minority which, in many respects, comprises the last of the rugged individualists in this country.

"I refer to the ranchers, the cattlemen, the wheat growers, and others who homesteaded land in eastern Montana, the Dakotas, and Wyoming, who were there before the railroads, with the railroads, and after the railroads, who have raised families for many decades on this land, and who have an investment which should not be applied just to the surface soil, but which should be protected as far as the subsurface minerals are concerned. . . .

"Even though they may be few in numbers, they have done a great deal to build this nation and to build and develop the West, and to make our part of the country what it is today. They want the fresh air to remain. They want to have a say about whether the subsurface rights on the land which they occupied and developed is or is not going to be subject to some . . . force outside the families which developed this land."

Independence and self-sufficiency are a source of pride among the ranchers, but in the fight ahead it could prove a limiting factor in effective organization for action. "You can't organize a herd of ranchers for anything," drawled one Wyoming stockman. But increasingly, the need

Laney Hicks is the Northern Plains representative of the Sierra Club. All photographs by Lynne Bama.

to do so has become apparent to even the most independent landowners. Walt Reynolds, state president of the Wyoming Stock Growers and past game and fish commissioner, feels his membership is well enough educated and well enough represented at the state level to protect and promote their interests, but he is worried about the decisions being made outside the state by coal interests, power companies, and federal bureaucrats.

Environmentalists have in common with the ranchers an interest in maintaining the present high-quality environment in the Northern Plains, the multiple-use values of the renewable resources, and an economy based on agriculture. Both groups fear that decisions about the future of the region will be made by men unfamiliar with the region and unconcerned about its environment.

"We share the fear that you people have," Reynolds said, "that decisions will be made by people not familiar with the area. And they will be wrong most of the time. The power blocks in Washington treat us as colonies. They are aliens to our locality and would run us under standards that they are accustomed to from a different society."

The Northern Plains is a tough land, and making a living there is tough, but it is also a beautiful land that will respond to man's yearning for endless horizons and a bright open sky. Historian and novelist Wallace Stegner describes the singular glory of the high plains in his book *Wolf Willow*:

"Desolate? Forbidding? There was never a country that in its good moments was more beautiful. Even in drouth or dust storm or blizzard it is the reverse of monotonous, once you have submitted to it with all the senses. You don't get out of the wind, but learn to lean and squint against it. You don't escape sky and sun, but wear them in your eyeballs and on your back. You become acutely aware of yourself. The world is very large, the sky even larger, and you are very small. But also the world is flat, empty, nearly abstract, and in its flatness you are a challenging upright thing, as sudden as an exclamation mark, as enigmatic as a question mark."

It is almost impossible to describe a typical rancher of this region, though many stereotypes exist. In fact, his philosophy and personality are as varied as the water, soil, grass, climate, and topography of the great sprawling land he calls home. One stereotype depicts ranchers overgrazing the land and killing eagles, coyotes, and other animals for no other reason than that they are considered "varmints." This cliché is inaccurate for the vast majority of ranchers in the Northern Plains, and the time has come to abandon such unfair generalizations. Some recent events have created a bias against ranchers and farmers in many environmentalists, but it should be obvious that the Northern Plains has retained its clean air and open spaces because of the uses to which the land has been put. The healthy environment of the region exists because of the ranchers, not in spite of them.

Ranching operations in eastern Wyoming and Montana now run from straight cattle and sheep ranches, or a mixture of both, to feeder cattle, cow-calf operations, and registered herds. Some of these are small intensive-management operations; others are extensive, requiring vast acreages.

Barnett Brock runs a small cattle operation in the southern hills of the Big Horn Mountains of Wyoming. Located in one of the most scenic and historical areas in the state, the Brock ranch covers several discrete geographical units, each of which requires different management techniques. There is summer range and winter range, and meadows that must be planted, irrigated and harvested for the feed to winter the stock. But in each case, according to Brock, the critical factor is moisture: "Without it, both range-forage production and livestock are in trouble."

Given the natural variables, it is easy to see that for ranchers long-range planning is difficult. Not only must they deal with the natural semiarid extremes in precipitation and temperature, but also with fluctuations in market prices and in the costs of supplemental feed, just to mention the most crucial. If the summer is dry and the winter harsh, Brock must purchase increased amounts of feed precisely when the demand is greatest and the price highest.

Even without market fluctuation, the price for all kinds of feed is going up. According to Brock, "Protein cake has gone from $75 a ton to $140 in just a very few years. These price changes are along the lines of other feeds: grains double, then hay doubles." Other years, there may be an excess of feed, so the rancher must either sell it at a lower price or hold it for the following year, when its nutritive value has deteriorated. Either way he loses. The same risks apply to the purchase and sale of livestock, but ranchers figure that over a long period the ups and downs will average out. Even so, Powder River rancher Marshall Young claims it is getting harder to make it as a small operator. "In order to increase production," he said, "we have to have working capital. And the small rancher has to take a larger percentage of his actual operating income for improvements and equipment than does the large operator."

Most of the larger ranches are located on the vast sagebrush and grassland prairies, where smaller operations probably would not be economical. Many people unfamiliar with this land and out of step with its particular rhythms mistakenly assume that the prairie is not useful, that it is mere wasteland. But the stockman knows better. As Wyoming sheep rancher Joe Burke put it, "There is no place in the U.S. that you can grow a crop on the ground like you can here. It takes more land per head, but this range supports animals throughout the year without grains or feeds. That's the value of the land." This specific quality will become increasingly important in the future. Vern Vivion, a rancher in southcentral Wyoming, pointed out that "grains on the world market are becoming more scarce, and their use as feed for cattle is limited. We need to keep the range grasses as one of the more efficient methods for production of red meat." But aside from the land's value as rangeland for cattle and sheep, it also provides important wildlife habitat, watershed, and recreation land. But as Walt Reynolds pointed out, "With industry coming in, multiple use is passé . . . you go to dominant use." And these days in the Northern Plains, dominant use means strip mining.

Grazing is a natural part of the prairie ecosystem. Sagebrush, shadscale, and greasewood, for example, are important brush species for both livestock and wildlife. And native grasses, such as buffalo, grama, needle, and thread, along with a variety of western wheat grasses, are higher in nutritive value than other, taller grasses. Because of the short rain season, the feed

value cures in the grass itself, where it is immediately available to stock, rather than remaining in the roots, as is common in lusher regions.

Proper livestock management can mean fences, rotation grazing systems, and even sagebrush control in certain instances, but other uses do not suffer if the rancher is planning with an awareness of the total uses of his land. For example, sagebrush control can benefit the winter range for elk, even while helping livestock production. And fences, though some people may view them as undesirable barriers, reduce impacts from certain practices that would be necessary if no fences were used. With fences, for example, stock can spread out and graze the land more evenly, and there is no need to herd and trail them, operations that have a heavy impact on the land. Pastures can be large, and fences constructed to accommodate the migration of wildlife. The number of considerations and land-use alternatives is as varied as the specifics of each local environment and the type of ranch system employed.

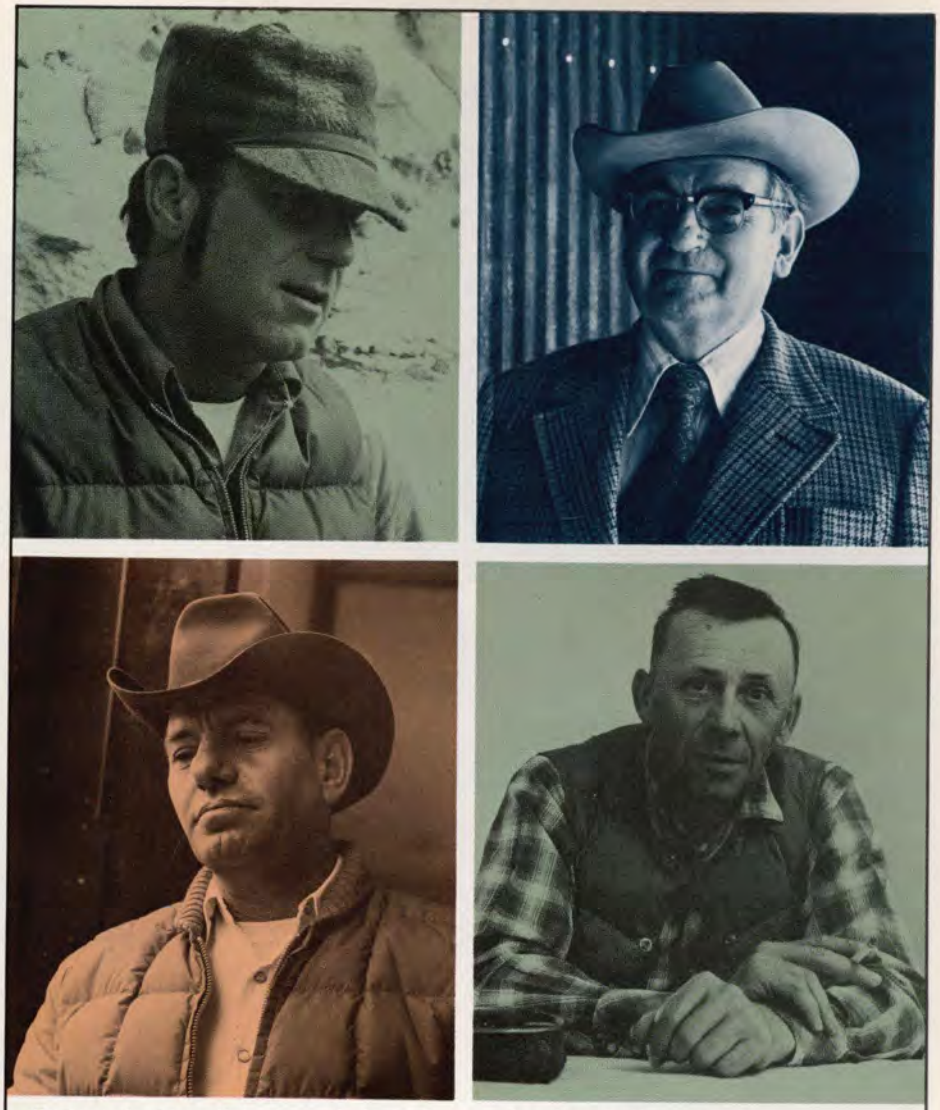
Northeast Wyoming and southeast Montana is foothill country, which is quite different from the range and grasslands of the Powder River Basin and southcentral Wyoming. Neal Garman and "Coop" Waters run medium-size operations in Wyoming's Sundance area. Waters runs a cow-calf operation, and Garman's ranch is a yearling feeder system, on which both hay and grain are grown and harvested for winter feeding. Garman calls this an intensive, balanced, and self-sufficient operation, with the objective of producing enough winter feed to match the grass consumed by summer grazing.

Amid the scenic sandstone outcrops along Rosebud Creek in southeastern Montana is Don Bailey's cattle ranch. Just over the hill to the north is a Peabody Coal mine and ongoing construction for Montana Power's huge Colstrip power plant. The Bailey ranch, homesteaded in 1886, is feeling the pressure from all sides: the economics of a family ranch, the threat of strip mining on lands within their operation, and air pollution that will come when the power plant goes into operation. Bailey feels, as do most rural residents, that the family farm and ranch are important to the nation. "What's going to happen unless these operations are put on a paying basis," Bailey warned, "is that the family farmer will go out of existence. The large corporate interests will own the land and put on tenant managers." If these smaller ranchers are lost, Bailey said, "personal initiative and efficiency is also lost. If it comes to the point where we are all tenants and the title only gives you the opportunity to pay taxes, we have nothing. [There's] no sense in battling over the ownership of property if you don't have anything to say about its future."

Unlike the vertical-integration arrangements of large industries, the plains farmer or rancher does not have much control over his immediate market. "There are so many different levels of the agricultural industry that need to be going at once to make the system work," Bailey said, "and you never get all the parts working together. There are the cow-calf producers, feeder operations, fatteners, packing industry, and on up. Every time a local feeder gets put out of business, it puts the bind down on the next level, the cow-calf operator. He has no one to sell his calves to next year."

Other factors ranchers must deal with are expensive machinery investments, labor costs, impacts on yearly production from climate variations, and the limited options that are inevitable in specialized operations. Bailey explained that "each rancher has to be everything, including a banker, politician, and public relations man."

Many of the small and medium-sized ranchers fear that if in addition



Preservationists with purpose, clockwise from top left: Don Bailey, a third generation Montana cattle rancher and board member of the Northern Plains Resource Council; Joe Burke, a sheep rancher from central Wyoming who is a past president of the Wyoming Wool Growers; Marshall Young, another third generation rancher on the South Fork of the Powder River and member of the Wyoming Farm Bureau's Natural Resources Committee; Neal Garman, a cattle rancher from Sundance, Wyoming and vice-president of the local Wildlife Association.

to having to cope with the traditional problems of the "ag business" they also have the coal and power interests breathing down their necks, then they may just have to quit. The problems may become too much and too many to cope with; the frustrations, too large and too frequent. According to Don Bailey, "The future of ranching in this area is uncertain. . . . Ranchers have long-term commitments and obligations, but they hesitate to continue if the land is going to be torn up."

Strip mining in southeast Montana would be disastrous for the ranchers in the area because the first lands to be mined would be the valley floors, where winter feed is produced. If one part of a ranch is destroyed, especially such an important part as these sub-irrigated meadows, the entire operation will be affected. There are not any other lands to replace those lost to stripmining because the coal development itself has caused land prices to rise to the point where only big-money interests—most of them from outside the region—can afford to buy.

"If you want to sell your land," one rancher said, "maybe you can get rich. But we don't want to sell. Then you have nothing to do. If you have any kids who come along, they usually want to continue the operation."

Land brokers are setting up shop for coal speculation. Montana cattle rancher Irv Alderson is concerned by their activity: "Brokers are trying to tie up blocks of land . . . buying it before the federal coal is leased." By doing this, he explained, they are "bartering with a commodity that isn't theirs—the federally owned coal. They are making more money than the guy who owns the land." If it weren't for the local landowners with their deep roots and long-term interests in the land, much of it would be leased and mined by now.

Some corporations are moving in to buy up western lands—some for tax write-offs and some for speculation on development that accompanies the establishment of coal mines, power plants, and gasification industries. Neal Garman has seen ranches around his own being purchased, and afterwards the quality of subsequent management has dropped. He said, "Their standards are different. We have to have this operation for a living; they don't." As a county commissioner, Garman thinks that in order to have a "balanced economy the land should remain in the hands of the local people. We have a better chance with more individual operators than a few big ones with outside money and objectives."

Barnett Brock has been offered millions of dollars for his scenic ranch, but he said, "We won't sell and don't plan to if we can help it." His ranch would be a goldmine for subdivision development. Walt Reynolds reflected on the same changes: "Take Colorado, for example. I graduated from Colorado University in the '30's, and Boulder was a fine place then. Now there's a paved highway up every valley and no place for livestock or game. The new residents think it's the greatest thing in the world."

Lee Keith of Kaycee, Wyoming, and a member of the northeast Wyoming Tri-County Planning Commission, said, "I can live with a hole in the ground and maybe some shortage of water better than I can live with large numbers of people."

This entire area is semiarid, and as Keith pointed out, unless we "keep the population small, they will take the water so important to agriculture for people in the towns that work for industry." Some counties are expected to double or triple in population in the next ten years. The county just east of the Big Horn Mountains will grow 900 percent in the next 15 years, ac-

SIERRA CLUB 1975 CALENDARS HAVE ARRIVED!

Dear Sierra Club Member:

The 1975 Sierra Club Calendars are in our Western warehouse earlier than we anticipated, and we're ready and eager to fill orders to members who want to get a headstart on 1975.

First, there's the *Wildlife Wall Calendar* which celebrates the diversity of wildlife—including magnificent photographs of such American animals as the great horned owl, the mountain lion, the puffin, and the river otter.

Then, there's the long-time favorite, the *Engagement Desk Calendar*—featuring over fifty outstanding full-color photographs by Les Line, Dennis Stock, Galen Rowell, Philip Hyde, Bruce Barnbaum, and other distinguished nature photographers. Introduction by Sierra Club Executive Director Michael McCloskey.

And of course, there's the *Wilderness Wall Calendar.* An award winner in years past, this best-selling calendar displays stunning full-color photographs of our wilderness by such renowned photographic artists as Ray Atkeson, Ed Cooper, Steve Crouch, Paul Stein, Arthur Twomey, Bob Waterman, and Hans Wendler.

The *Trail Wall Calendar*—a new and exhilarating addition to the calendar line—takes its theme from the challenge of the mountain and the outback in North America and in Europe. Inspired by the *Totebooks,*® it includes full-color photographs of parts of our planet which welcome the hiker and the climber.

We want very much to avoid the disappointments of previous years when demand for the calendars exceeded supply. To that end, we have in stock more calendars than ever before. However—I do urge you to place your orders as early as possible, which will help us avoid the inevitable delays that occur as the Christmas season approaches.

We know you will enjoy—and use—your 1975 Sierra Club Calendars. We like to think that a Sierra Club Calendar on the wall or the desk serves as a striking reminder of the wilderness values we want to preserve.

Sincerely,

Jon Beckmann
Editor-in-Chief
Sierra Club Books

P.S. You'll find that this year we are not able to provide you with the convenience of a reply envelope. Postal authorities have made it impossible for us to do so in the *Bulletin.* Our thanks in advance for taking the extra time to use the attached order form and your own envelope.

cording to telephone company planning projections. Ground water is extremely important in Wyoming's rolling sage and grassland prairie. A stockman's ability to use rangeland is dependent on a supplementary water supply, usually from shallow aquifers and perched water tables. Powder River stockmen increasingly fear that these water sources will be drained by mining operations tapped early at their recharge source at the base of the Big Horn Mountains. So many factors affect the groundwater supply that no one now really knows how projected uses will affect volumes and static levels in different areas. They may never come back to their original state. Walt Reynolds dryly observed, "With ground water, there is a great deal they are speculating on that they just don't know."

Oil, gas, and coal-exploration drillholes may not result in wells or mines, but they may deliver instead wells that ranchers can use. But many exploration operations are conducted improperly. Aquifers with differing water quality are allowed to mix, and pollution occurs from the shale beds in between. This contamination is especially serious in uranium exploration, where 400 holes to the square mile are the rule.

Competition for surface water is an immediate issue.Who owns how much water and has the jurisdiction to sell it, build aqueducts, and slurry pipelines? What interests can pay the cost per acre-foot for transbasin diversions? Will the water demand of new populations require taking water away from agricultural interests, which, under present statutes, have a lower priority when such decisions are made? Will industry, which is third in line, override agricultural interests once a community becomes economically dependent on it?

"We can think that local laws will protect present water rights," Don Bailey said, "but when you have thousands of people using a product, there won't be rights for a rancher to irrigate a field. Companies know that even the air standards can be set aside when they get a community established and dependent on them."

Local officials already must deal with existing mineral developments established in the states. County Commissioner Neal Garman said the tax base in his county is inadequate now to meet services and impacts caused by recent construction of the interstate highway. Industrial development is one way to compensate for that impact. "Nobody is for higher taxes," he said, "but a lot of people want improvements. . . . Those who profit from the mineral resources should pay their way." In Montana's Rosebud County, where a power plant is now under construction, the tax base is inadequate to pay for services required during construction. It is the same here as in urban areas: you never catch up paying for growth.

Lee Keith argues strongly for "plans to make industry pay for services before they get a permit to do anything. So many of these people don't care about the towns or land because they have not been part of building the community." Most local people think that those who plan to stay and put down roots in the area are all right, but the transient exploration and construction workers are not only increasing social friction, but the costs of maintaining ranch operations. Daily occurrences include trespass, littering, illegal hunting, and destruction of fences and machinery. Walt Reynolds explained that "discrimination is everywhere, but it's not a matter of us trying to keep people out. Everyone wants to keep his values, and they are often in conflict with the community, or other interests." According to Reynolds, "in a light or small population we approach the concept of real democracy. . . . More people make it disappear. . . . In this situation the individual has lost an important role where he had direct input into the system." Anyone who lives in the Northern Plains recognizes the influence an individual still has in his community and state. But most of us in the populated areas, if we are honest with ourselves, will admit we have lost a great deal in this respect. We might envy their situation and hope they can maintain the benefits of a low population.

Ranchers' opinions on surface mining and regulation are spread across the board. Neal Garman and "Coop" Waters think the mining companies are working hard, with the local Soil Conservation Service doing most of the planning, and that both "are trying to bring it back to a reasonable form and a type of grass that will grow." Joe Burke has a similar opinion but said, "We can't tell about the results yet. It's going to be expensive, but they should reclaim. I've seen West Virginia and I'd hate to see that happen here." In Montana, Irv Alderson is afraid reclamation will be confined to establishing monocultures that can easily be wiped out by extremes in climate, and that will be unpalatable to livestock certain times of the year.

Vern Vivion, with the coal interests of Union Pacific and Arch Mineral (Ashland Oil and Hunt Enterprises) just across the fence and moving his direction, said, "When the coal companies find out they will have to go deep for most of the coal, they should just start with the deep and not do surface mining at all." Some of the outcrops they want to mine within his operation are the very slopes that are most valuable for winter range because the snow is blown off. But these same southwest slopes will be the hardest to reclaim because of prevailing winds and high evaporation losses. Vivion also thinks there is potential, as far as regulation goes, that mining companies will "go through some motions, but won't meet the objectives beyond the language of bureaucrats and environmentalists." He asks, "Who do they have to satisfy? It is more important to return the land to a satisfactory use than to collect royalties, and if we have an equal hand we can set our own standards."

Next to the Vivion ranch is Palm Livestock. Three surface mines are producing within this operation, and another will open soon. All land-use management here, as on the Vivion ranch, is complex because of Union Pacific's checkerboard ownership in the area. Jerry Palm is opposed to surface coal mines: "They just interrupt everything. Mining with the new modern machines just makes a bigger mess faster." Leasing in the Hanna area of southcentral Wyoming occurred in the 1960's. "We didn't know enough about the mechanics to deal with them then," Palm said. "Ranchers have a tendency to believe people, and we didn't want to obstruct development. But trying to get along with them has been almost worse than doing nothing."

The Hanna Rosebud Mine, owned by Peter Kiewit, has been producing for ten years, and they haven't spent much time on reclamation. "Their engineers know exactly where the new cuts will be," Palm wryly remarked, "but they can't seem to tell us when the old ones will be filled in and re-

Continued on page 16

to not forget...

Ascent,'74

LITO TEJADA-FLORES

THE MASTHEAD of *Ascent* describes it as the "Sierra Club Mountaineering Journal." It is that, certainly, but something more, just as mountaineering itself is something more than just conquering rocks. And an explanation of what *Ascent's* "something more" might be cuts close to the heart of what it means to a man when he puts his strength, his skill, and often his life to the test at that place where, as a mountaineering poet once put it, "Heaven's a foot high."

At the outset, nearly eight years ago, *Ascent* was designed as a kind of reaction to the generally drab incomprehensibility of most climbing prose ("Then I moved up a strenuous 5.8 crack, traversed right on delicate flakes, and ascended an obvious 5.6 chimney."). The editors reasoned that if climbing itself was an adventure, then reading a mountaineering journal could also be an adventure. It was a question of finding climbers who could write, and encouraging them, as well as creating a showcase for the highest quality mountain photography. We have managed both, I think, with a continuing search for the new—new authors, new photographers, new climbs, new ideas and directions in climbing, new visions of climbing style and esthetics.

But again, something more: Instead of

DOUG MCLEAN

Ice fall from the Los Angeles Aqueduct.

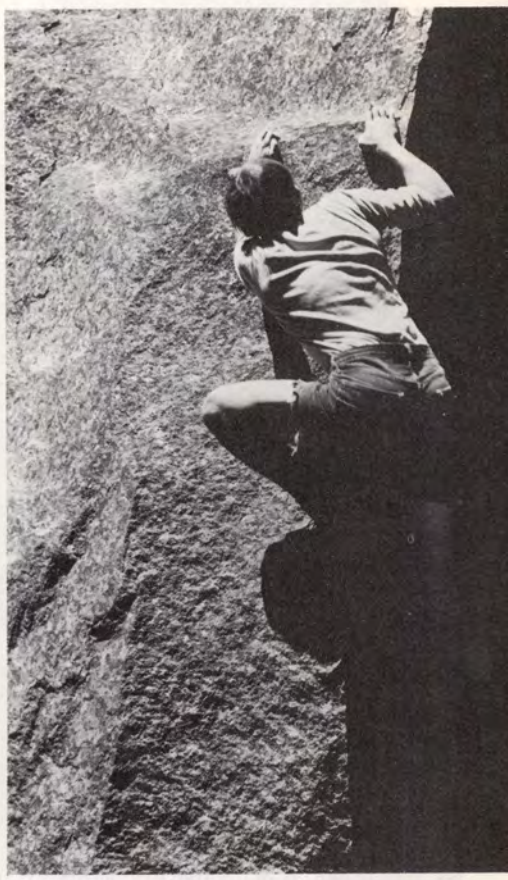
ALLEN STECK

Mt. Dhaulagiri, whose southeast ridge defied the best that a 1973 expedition could bring to it.

To climb the ice without cutting a step is an expression of new techniques—a bold practice that leaves the slope behind as clear as the pitch ahead. "Bouldering," an equally pure form of contemporary climbing, abandons rope and piton to achieve the ultimate in unencumbered movement. The rocks of Lamonix, of Alaska, of East Germany, of Yosemite, though different in texture, morphology, and lines of attack, are still a matter of holds, jam-cracks, friction, and that last "thank-God-ledge."

At the right a young East German climber "lie-backs" barefooted against a thin crack. Far right: at Yosemite a cragsman prepares to "mantleshelf" up to a tiny, outsloping ledge.

STEVE ROPER



STEVE ROPER

stressing mountaineering performance or achievement for its own sake, *Ascent* has tried to get into the human, or emotional content of a climb, for it is in the realm of the human response to climbing that we begin to learn something of its meaning. This direction has led us to publish not only "standard" narratives of climbing, but essays, humor, satire, fiction, and even poetry. In this is the sharing of a very private world, a world illuminated, for example, by Jeff Salz's reflections on the death of a companion on Mt. FitzRoy in Patagonia (from an article appearing in the 1974 *Ascent*): "Inside we are still very tender. We do not want to forget; we want only to learn. There is power in me, for I am the survivor. But for how long will I survive? And until then it has to be all, all that is the best of me. That I owe Steve and myself. FitzRoy is one way for a good man to go down. Because to live without a song and a dance is not to live at all, really."

And that is the "something more" of *Ascent*. In the thrust of its prose and photography, the magazine seeks to communicate that mysterious relationship between men and rock. No small and unimportant dream, for we believe that in the dimensions of rock may be found the joy, the wonder, and—yes—the terror of life.

Lito Tejada-Flores is one of the editors of* Ascent *magazine and co-author of the Sierra Club Totebook,* Wilderness Skiing *(1972).

JIM STUART

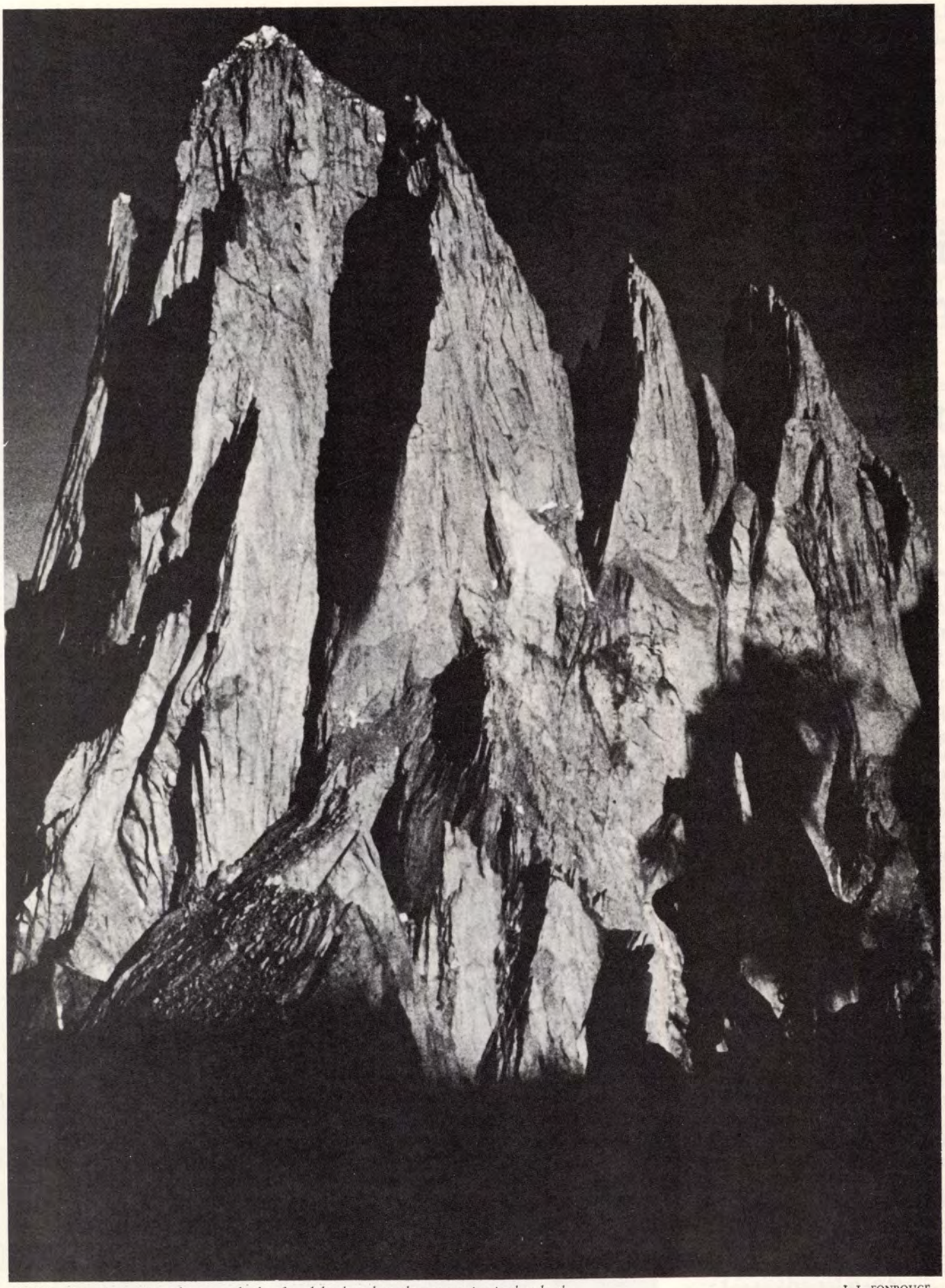
The mists of time and rock: Yosemite.

STEVE ROPER

STEVE ROPER

At the ragged edge of life, the climber merges into legend. Fritz Wiessner is a man who has passed into his '70's yet still leads vertical rock pitches. Almost single-handedly Wiessner introduced technical rock-climbing into the United States some forty years ago, and today he still climbs with the craftiness of the youngest pro.

The skill of a master like Fritz is not confined to any special techniques or personal alps. He climbs because he loves it and he climbs what he can climb.



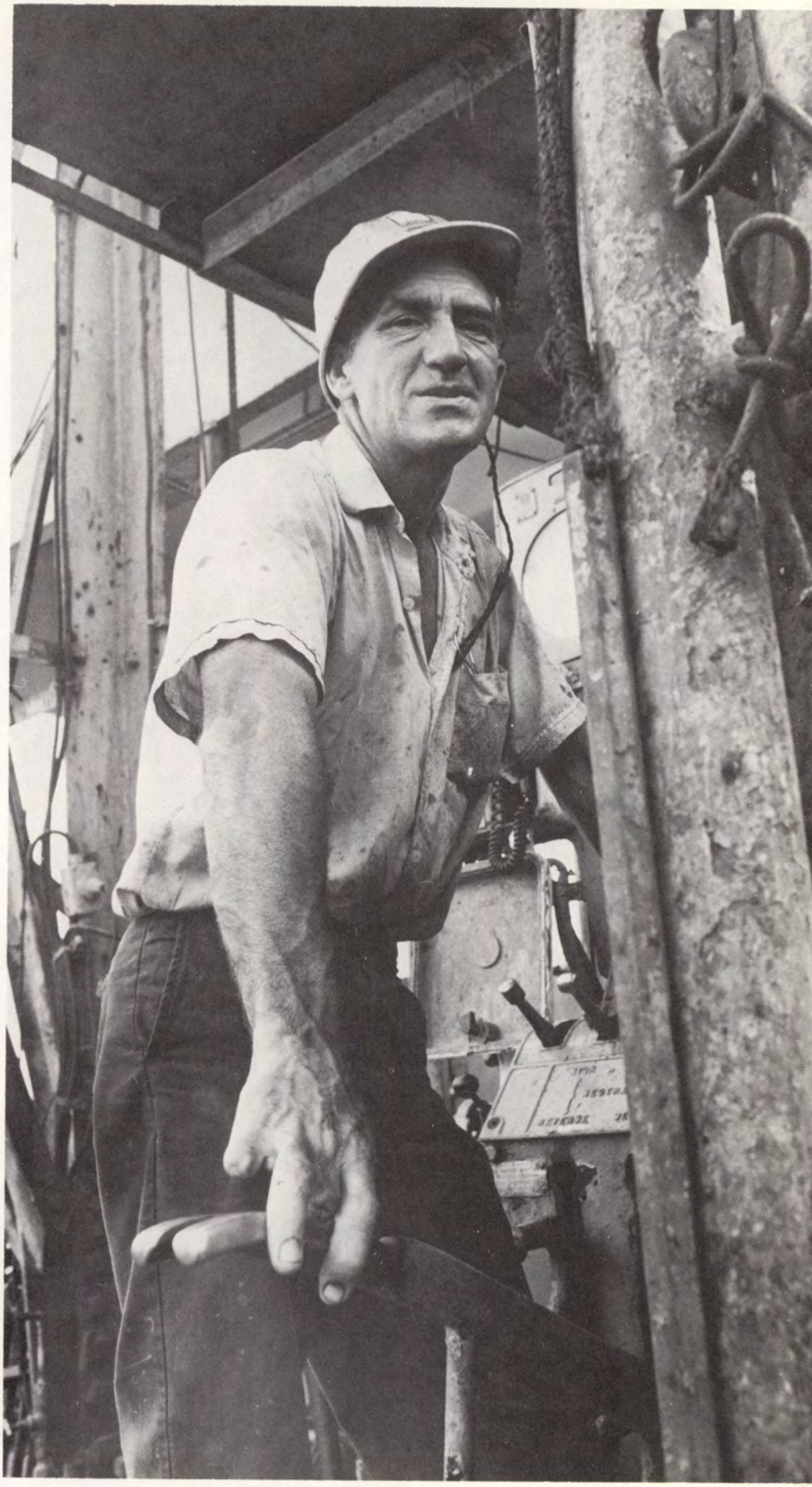
Mt. FitzRoy, Patagonia, where one climber found death and another a meaning in that death.

J. L. FONROUGE

WILLIAM FUTRELL

Oil and Trouble in the Louisiana Wetlands

Drilling in the bayou country and offshore has wrought changes in twenty years that may take another ice age to repair.



MARK ENGLEHART

William Futrell is Professor of Law and the Secretary of the Board of Directors of the Sierra Club.

IN FEBRUARY, 1970, when a blowout at Chevron's platform Charlie off the Louisiana coast resulted in a major oilspill, many conservationists along the Gulf Coast shifted their attention for the first time from the classic conservation issues of parks and wildlife to the problems of environmental pollution. At first, they focused on the more dramatic problems associated with offshore drilling —oilspills, for example. But in time, following the lead of career conservation officials in state and federal agencies, they came to understand that the most severe environmental impacts of offshore oil development were not the results of oilspills, but of the construction of onshore support facilities. Conservationists discovered they were dealing mainly with a land-use problem, a problem in coastal-zone management, for in the previous 30 years about 200 square miles of Louisiana's coastal wetlands had been destroyed as a result of onshore petroleum facilities. And in all this time, Louisiana had had no coastal zone management.

The economic development of Louisiana during this same 30 years has been intimately connected with the petroleum industry—offshore oil in particular. The bumper sticker often seen in southern Louisiana—"Oil feeds my family"—is true. When you talk about offshore oil, you are really discussing the Louisiana experience. More than 25,000 wells are in production along its coast, and more than 90 percent of all the offshore wells ever drilled in this country have been off the Louisiana coast. Offshore production in California and Texas is minute by comparison. Therefore, it is essential that policymakers concerned with future offshore-oil development consider what has already happened in Louisiana. Yet the Council of Environmental Quality's recent study of the possible effects of future offshore development on the Atlantic Coast failed to do so, an omission for which it has been sharply criticized.

The Department of the Interior has proposed offshore-oil exploration and production off the Atlantic Coast and other areas and plans to increase offshore production tenfold in the coming years. Even though Administration pronouncements and oil-company propaganda assure the public that offshore-oil development is environmentally safe, the Administration has delayed funding the Coastal Zone Management Act. It is obvious that the officials in charge plan to launch a full-scale offshore-oil program without taking the precaution of implementing a coastal-zone-protection plan to deter adverse onshore environmental impacts. The Louisiana experience suggests that the severe destruction of wetlands that occurred there could have been prevented by environmentally sound coastal-zone planning. Unless the Coastal Zone Management Act is implemented now, further expansion of oil-related development into the Atlantic coastal and estuarine areas will constitute an irreversible commitment of the coastal zone to a single short-term use.

The history of Louisiana's coastal zone over the last generation is one of exploitation of *non*renewable resources and the deterioration of the natural environment on which renewable resources depend. The oil industry moved into the estuarine areas of the state in the mid-1930's, when drilling barges plied the inner waterways to drill for oil at the bottom of the many shallow lakes. In the late '30's, canals were dredged to provide access to previously inaccessible marshes and bayous so that submersible drilling barges could be moved into position. The first well out of sight of land was drilled in the Gulf of Mexico in 1937. Since then, the coastal zone has produced 90 percent of Louisiana's oil, with the majority of the producing wells located in swamp and marsh areas. These wells are serviced by dredged canals 65 to 75 feet deep. It has been estimated that for each mile of canal, eight acres of marshland have been destroyed. The oil is pumped to processing facilities through pipelines. In 1971, approximately 8,000 miles of oil pipeline stretched across the coastal marshes of Louisiana, and as new technology was developed even more inaccessible wetlands were explored.

The petroleum industry's impact on the economy of Louisiana has been significant, largely because the oil boom led to the secondary development of an associated petrochemical industry. The population of the state, which had remained static, shifted from the northern region to the coastal zone, where the population increased 51 percent between 1950 and 1970. The area of highest growth, of course, was the oil coast. From 1936 to 1971, approximately 80 percent of all new investments in manufacturing facilities in the state was in the coastal-zone parishes. More than five billion dollars was invested in the petrochemical industry in the Louisiana coastal zone during those years, when approximately 100 major petroleum and petrochemical plants were built.

Naturally, such rapid development caused great changes in the coastal marshes. A recent study entitled, *A Louisiana Wetlands Prospectus,* published by the Louisiana Advisory Commission on Coastal and Marine Resources, states that increasing acreages are being closed to oyster harvesting because of pollution, that oyster yields per acre have decreased tenfold in the last 30 years, that the shrimp catch per boat has decreased ninefold in the same period, that saltwater continues to intrude farther inland, and that wetlands are being lost at a rate of 16.5 square miles a year. The prospectus declares: "It is clear that insufficient attention has been given to planning and managing conservation and growth in the Louisiana coastal-zone region. Growth and development have been foremost. Conservation and environmental impact considerations have not been adequate."

During recent years, pollution violations have been issued on the average of 100 a month to oil companies operating in the coastal marshes and offshore areas. Many observers believe that the chronic oil pollution resulting from these nickel-and-dime spills is a far more serious threat to the environment than the occasional spectacular blowout.

In the wetlands and coastal waters of Louisiana, a single structure or activity—whether it be an oil well, a refinery, or a highway—will not by itself decisively affect the health of the environment, but the cumulative effect of such projects results in an irreversible environmental decline. No matter how rich a state's coastal area may be, there is a limit to the amount of environmental stress that it can withstand. A number of respected observers believe that Louisiana's coastal zone has reached that limit, that there is no longer an excuse for allowing the oil companies, agricultural drainage projects, urban developers, and the mining industries to work unimpeded in the coastal marshes.

Dr. Sherwood Gagliano of Louisi-

ana State University's Center for Wetland Resources has warned that another 30 years of abuse at the present level will probably destroy the viability of the Mississippi Delta system, that if only half the projects and development schemes now on the drawing board were to be implemented in their proposed form the damage to the delta would be irretrievable. Through the study of maps and photographs, Dr. Gagliano has established that the coast of Louisiana is no longer gaining new lands, as a delta coast should and as the Mississippi Delta has done for the past 4,000 years. Rather, it is now losing land at the rate of 16.5 square miles per year. In the past 30 years the Louisiana coast has lost almost 500 square miles.

Dr. Gagliano has further concluded that a major portion of the marsh destruction has resulted from the actions of the petroleum industry. Other contributing factors are canals, roads, flood control projects, and service facilities to service the secondary development of the oil-associated industries. The cumulative effect of onshore facilities for offshore drilling—the dredging and filling for sites, the use of the marshes as a dumping ground for waste—has led to the destruction of a large percentage of Louisiana's coastal wetlands. The introduction of a heavy industry such as offshore oil into the marshes presents a major crisis for the coastal zone.

In Louisiana, city and local governments, which once welcomed every increase in oil-company activity, now have reversed their position to the extent of bringing suit to enjoin the oil companies from further destroying the marshes. At public hearings, local officials are beginning to speak out for the protection of the renewable resources of the wetlands and to question the uncurbed dredging and pollution of the coastal zone during the past years.

Unfortunately, the federal government has been the least responsible party in this story. The Administration has ignored the Coastal Zone Management Act and has refused to fund coastal-zone management programs for years. Only now, when offshore-oil development has been proposed for the Maryland and Massachusetts coasts, has the Administration finally, though slowly, begun to release the funds appropriated by Congress for coastal planning. Even so, the Bureau of Land Management has become a classic regulatory agency in the tradition of the Civil Aeronautics Board and the Interstate Commerce Commission, concerned only with the protection of its client, in this case, the oil industry. The President's call for a tenfold increase in offshore-oil production, together with the opening of the Atlantic outer continental shelf, is a policy with profound and disturbing implications for our coastal lands. The lessons learned in Louisiana should be a warning against any such hasty development.

Big Sky (*Continued*)

claimed." As reassurance, the local company officials have resorted to claiming reclamation success at their mines elsewhere in the state on the basis of meadows that were never mined and growth on spoil piles that subsists mostly because of excessive fertilization. The attitude of coal companies in the Rosebud area toward the local community is blunt, if nothing else. They are reported as having told the town that they put so many dollars in, and they were going to take at least that much out.

Some ranchers who are promoting mining, however, have claimed their ranches will be more productive after mining than before. John B. Kendrick II, in public testimony, said he thought this would be true because contours would be improved, introduced grass species would be more productive, water storage ponds would be created, and there would be conversion of rangeland to irrigated hay meadows. Coal officials have similar visions.

Productive and stable lands are the base of renewable-resource industries, whether it be agricultural or recreation or some other. For the most part, the ranchers' philosophy is summed up by Vern Vivion: "Conservation of land is our cash reserve. The monetary cash flow and reserve for us is lousy, but our big investment is in land, and we must protect that or we have nothing. When we stop the practice of land conservation, we are broke. . . . There will be no base to borrow on or put animals on."

While recognizing and suffering from the public outcry on individual excesses and abuses of range resources, there are a number of agricultural leaders who see an immediate need to improve communication with environmentalists and work together where possible. There is an unbelievably complex interrelationship between all the interests who own, influence, and control decisions. As representatives for the national organization, local Sierra Club members in the Northern Plains are assessing and formulating possible options for the future of the region. These should proceed in cooperation with, and direction from, the local interests who share many of our goals. There is no question that ranchers and environmentalists have much in common.

Although everyone in the nation has a stake in the future of the Northern Plains, only a few powerful interests are now making the decisions. National and international corporations are attempting to orchestrate public opinion in a rush to exploit the nonrenewable resources of the region. A Gulf Oil official quoted in the *Minneapolis Tribune* last year had a clear understanding of the forces at work: "The disposition of these deposits of coal will be determined by the economic and social implication of some 150 million megalopolitans located to the east. . . . Providing we still have a representative form of government, then the West's minimal population, with their opinions, hopes, desires about certain tracts of real estate, will be of little, or more probably, of no consequence to the voting majority." But what is representative or democratic about a few companies profiting from the exploitation of public resources while overriding the minorities who live and produce in the area now? Furthermore, 150 million "megalopolitans" already consume the products produced here, vacation here, and value the scenery and wildlife here.

While recognizing the role and values of the agricultural industry and its interrelationship with other renewable resources, the Sierra Club should join with state and national officials to see that the Northern Plains are not to be the latest sacrifice in the energy game. Senator Mansfield has initiated the lead: "Montana and our neighboring states," he said, "need not convert from an agriculture economy to a dependence on coal mining. The West need not become the utility backyard for the rest of the nation. Proponents of greatly expanded strip mining are looking for an easy way out of the energy crises. . . ."

STEVE JOHNSON,
T. H. WATKINS,
AND ROGER OLMSTED

RV/II

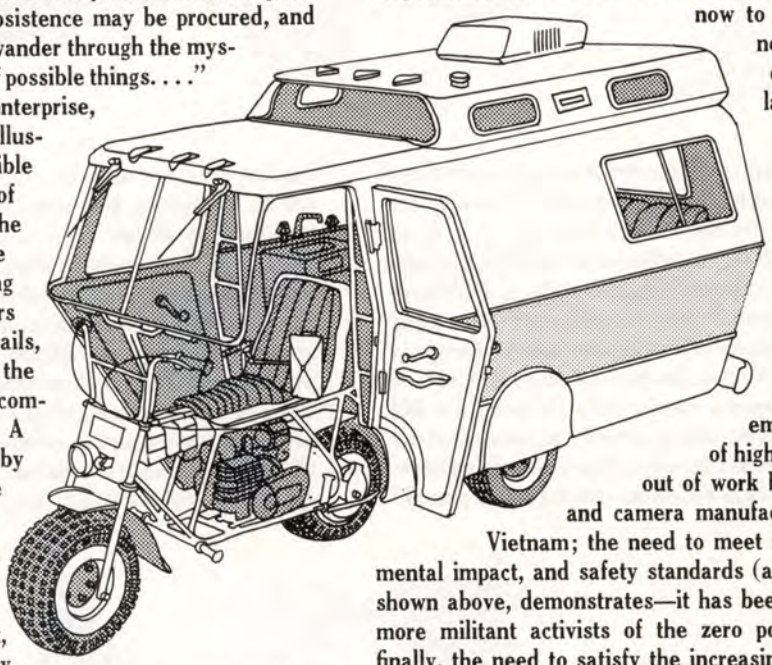
The New Generation of Recreational Vehicles

Footloose but footsore? Well, let the Sierra Club be the first to tell you that tomorrow is just around the corner.

In the year 1813, Simeon DeWitt essayed the following observation: "The Americans are an inventive people; perhaps more so than any other existing. Without arrogating to ourselves any superiority of intellect, the cause may be traced to the facility with which a respectable education and comfortable subsistence may be procured, and which leaves leisure to the mind to wander through the mysterious, unfathomable repositories of possible things. . . ."

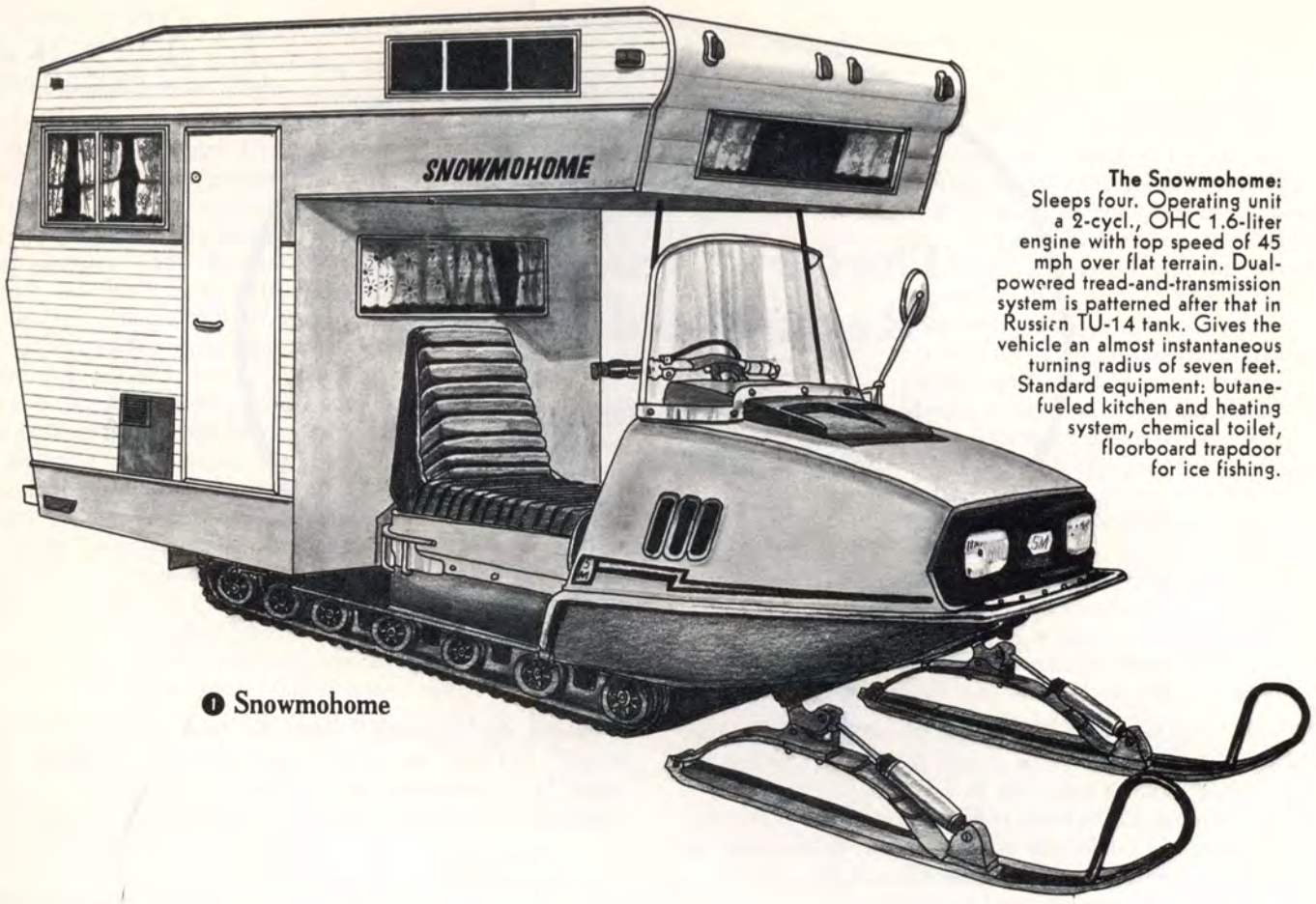
In the saga of American business enterprise, no single chapter more thoroughly illustrates the native instinct for "possible things" than the remarkable growth of the recreational vehicle industry in the years following World War II. Before then, there was virtually no such thing as a recreational vehicle; twenty years after the war ended, the highways, trails, parks, deserts, and campgrounds of the nation echoed to the roar of internal combustion as the sound of adventure. A need had been recognized and filled by a galaxy of possible things, and the industry that supplied them had become a Cinderella tale of success.

Then came the financial crunch of the mid-1970s, a development that nearly crippled what was at best, it must be said, a marginal industry. The price of individual shares in the Winnebago Corporation (the world's largest manufacturer of cab-over camper units and motor homes), for example, plummeted from a high of 98½ in late 1971 to an abysmal 5⅝ by the middle of 1974. The industry was on its last wheels, yet once again it rose up to demonstrate a basic truth of American enterprise, as once articulated by Mark Sullivan: "Intellectual freedom and curiosity about the new, the instinct of the American mind to look into, examine, and experiment—this led to, among other things, a willingness to 'scrap' not only old machinery but old formulas, old ideas; and brought about, among other results, the condition expressed in the saying that 'American mechanical progress could be measured by the size of its scrap-heaps.' "



Another way of putting it would be "Back to the old drawing-board!" And back the industry went—not only to redesign and retool, but to revise the very processes of manufacture, even the corporate structure itself. The old need remained, but it was linked now to a long chain of additional needs: the need of the industry to escape domestic labor costs, become flexible, and decentralize; the need of such emerging nations as Libya to establish strong industrial bases; the need of such nations as Japan to utilize technological advances it had previously found no particular use for; the need of such nations as West Germany to create employment for the thousands of highly-skilled craftsmen thrown out of work by the blossoming of watch and camera manufacture in Taiwan and South Vietnam; the need to meet rigid air pollution, environmental impact, and safety standards (as the "Highway Homette," shown above, demonstrates—it has been endorsed by some of the more militant activists of the zero population movement); and, finally, the need to satisfy the increasingly specialized recreational requirements of the American family.

The result of the "scrap-heap" revolution has not only revitalized the recreational vehicle business but has made it an international industry. It is estimated today that within sixteen years one out of every four people in the free world will be engaged, directly or indirectly, in the manufacture and sale of recreational vehicles. On the following eight pages, we present a survey of some of the industry's newest designs, with particular attention paid to safety, environmental, and reliability factors. Some are on the market now, some will be in production within a few months, and others are as yet in the research-and-development stage. All, however, bear witness to the words of Charles F. Kettering, founder of the General



The Snowmohome: Sleeps four. Operating unit a 2-cycl., OHC 1.6-liter engine with top speed of 45 mph over flat terrain. Dual-powered tread-and-transmission system is patterned after that in Russian TU-14 tank. Gives the vehicle an almost instantaneous turning radius of seven feet. Standard equipment: butane-fueled kitchen and heating system, chemical toilet, floorboard trapdoor for ice fishing.

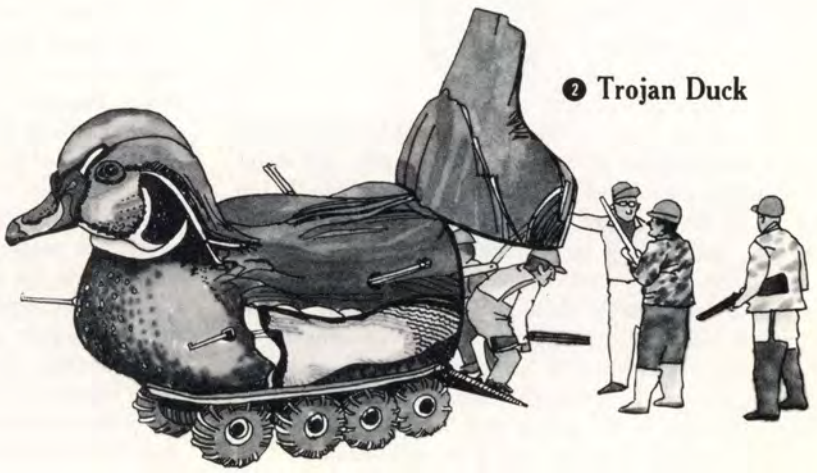
❶ Snowmohome

Motors Research Corporation and developer of ethyl gasoline: "Research is simply trying to find out what we are going to do when we can't keep doing what we are now doing. . . ."

❶ FAMILY FUN IN WINTERLAND. . . . Soon to be available through dealerships of the Owyhee Industrial Park branch of Winibuchi International, the "Snowmohome" seeks to tap the market created by business trends toward staggered vacations. As the Owyhee-Winibuchi brochure has it, "Now the bright landscape of winter is no longer an obstacle to family campout fun." Winibuchi's Bill Pickwick reports that the corporation is actively supporting widespread public efforts to establish snowtime convenience facilities. "It just doesn't make sense," says Pickwick, "for anyone to pretend that the need doesn't exist. It's to the shame of the public that there are no restrooms, hot water, or service stations available to the family snowmobilist."

❷ THE BEST BUY IN BLINDS. . . . Designed by Frederick Mallet, marine architect and frequent contributor to outdoor magazines, the "Trojan Duck" combines the best qualities of the standard blind and the old-fashioned decoy, together with the added comforts which we associate with recreational vehicles and efficiency apartments. Though virtually noiseless and pollution-free in its ten-speed derailleur pedaling system, most units will no doubt be purchased with the Diesel-electric option.

❸ BUILT FOR TOMORROW. . . . By far the most ambitious and



❷ Trojan Duck

The Trojan Duck: Color-fast body molded of two layers of fiberglass with steel mesh between. Resistant to fire, water, weather, whitewater collisions, and buckshot.

Illustrations by STEVE JOHNSON

The Homotel: Standard equipment of Homotel includes 60-gallon polypropylene water tank; 30,000 BTU furnace; 8-cubic-foot refrigerator; 4-burner range and oven; 2 baths (one Japanese country tub, one shower only); 4-level stereo, air-conditioning, sauna, water-purification, and 110-meter radio communications systems; and fold-down combination Olympic-class pool table and badminton court.

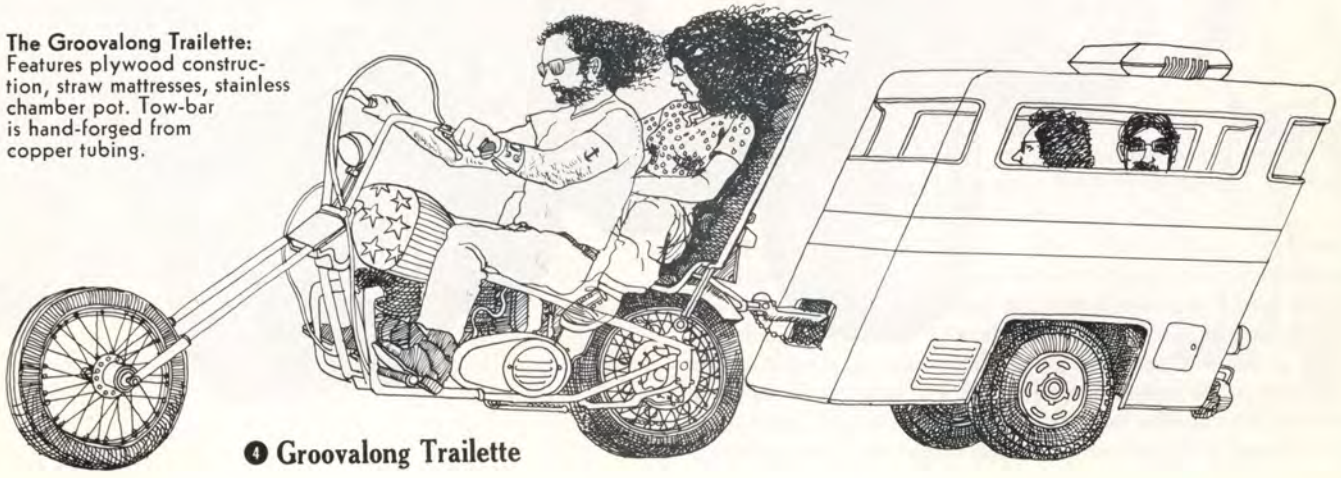
Engine a Compound Vortex Control Combustion V-8, a stratified-charge version of standard inverted Diesel—285 hp. Exceptional climbing power, and surpasses most stringent emission standards now in effect.

❸ Homotel

innovative of camper-pickup combinations is the roomy new "Homotel" from Aksarben of Omaha. An outstanding feature of the system is the modular unitizing inspired by recent developments in Japanese architecture. Each unit can be attached separately, thus meeting the needs of the budget-minded family as well as those of the well-heeled individualist. Modules can be attached in a matter of minutes with no tools more exotic than screwdriver, crescent wrench, and vice-grip pliers. Fully assembled, the Homotel sleeps up to sixteen, with variable floor plans for various uses. Engineering note: Early models of the Homotel were plagued with front-end wander and a "nosedive" flaw when the brakes were applied. Current models are equipped with gyro-Germanizers developed by Kunstwagen Gesellschaft, and our test drivers report no loss of control in less than panic maneuvers.

❹❽ The "GROOVALONG TRAILETTE" AND THE "KARMABILE...." These are the first products of the Yin-and-Yank Cooperative of Kennebunkport, Maine. Unfortunately, the Yin-and-Yank mailer gives us scant technical information. Sample copy: "Not just a way of getting around . . . but a way of getting in, deep in, far into the shimmering waves of your essence . . . where you see not only where you are going but what you are going . . . and all the time you are touching, touching, touching your brothers and sisters and listening with the inner ear to the sound of one hand clapping. . . . E-Z credit terms available." Yin-and-Yank reports eight months' backlog of

The Groovalong Trailette: Features plywood construction, straw mattresses, stainless chamber pot. Tow-bar is hand-forged from copper tubing.



❹ Groovalong Trailette

The Lonesome Roader: Miniaturized four-cylinder 12-cubic-inch OHC engine produces surprising 23 hp. Entire unit can be stored in the trunk of the average Datsun.

❺ **Lonesome Roader**

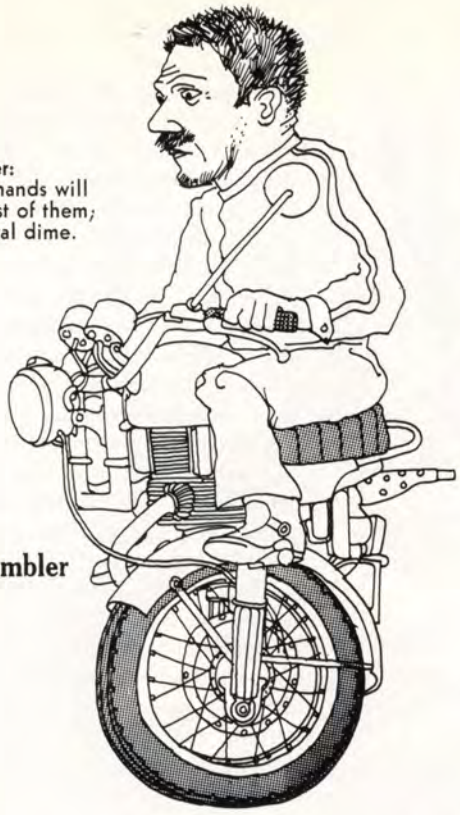
The Casey Jones: Super-duty, four-level oil suspension system and revolutionary 6-wheel drive give Casey Jones excellent maneuverability and terrain capability under most weather conditions. Platinum-radial tires optional.

orders—but we would not recommend either vehicle until our engineers can procure and test them.

❺ "LESS IS MORE...." The "Lonesome Roader" is a marvel of rugged miniaturization that should appeal to those who want to strike out over strange country with gyroscopic indifference, who seek the mobility of a trail bike and the sturdy reliability of an old-fashioned Jeep. Training wheels available, if desired.

❻ "FOUR WHEELS BETTER: SIX WHEELS BEST...." Recently introduced by One World Enterprises, the "Casey Jones" qualifies as the most advanced design in adventure marketing today. The alcohol-burning steam engine, perfected in Denmark by engineer Ti Hale, pulses beneath a Jeep-inspired bonnet and provides the get-up-and-go to propel the huge machine up a thirty-degree sand hill at a steady forty miles per hour. Almost exhaust-free, the "Casey" carries a two-week supply of torpedo-grade alcohol and distilled water, and features a rear unit containing ample space for the transport of two tons of gear, six outdoorsmen, and all the petroglyphs or game they can carry. Special "unitilities," as World calls them, can be provided for a price on request.

❼ STILL LESS IS BETTER.... The "Uniscrambler," produced by Milpitamobile, reduces rec-riding to its essence. The reliable two-cycle Japanese horsepower unit is produced in the United States by Itchibinsu of Osaka—a real plus on the side of the balance-of-payments problem. Uniscramble clubs are already springing up on the West Coast, near the Milpitas headquarters of the manufacturer. Note: This is not a vehicle to be used without competent instruction—hence the importance of, for instance, club membership.

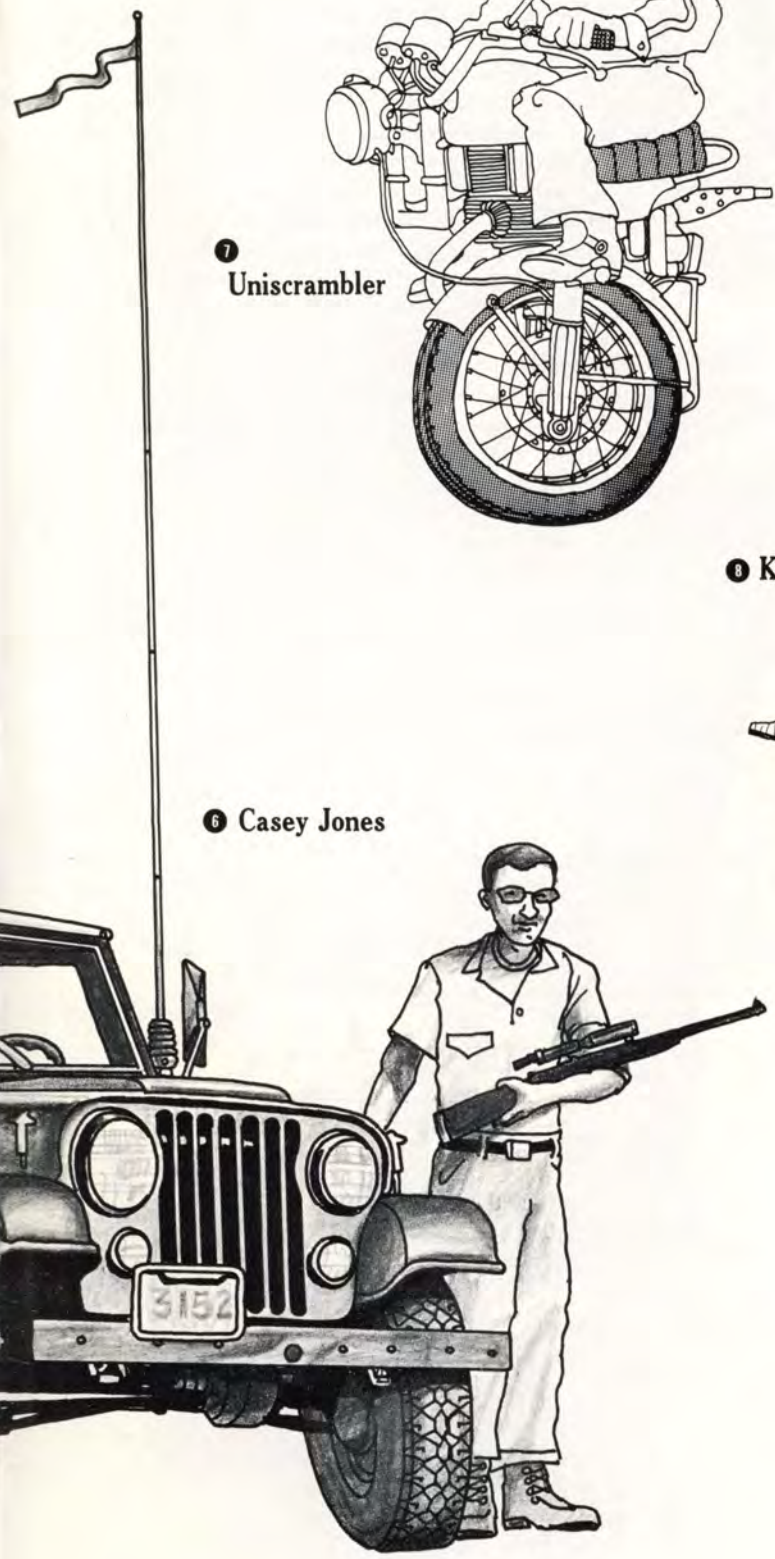


The Uniscrambler: In experienced hands will outclimb the best of them; turns on the literal dime.

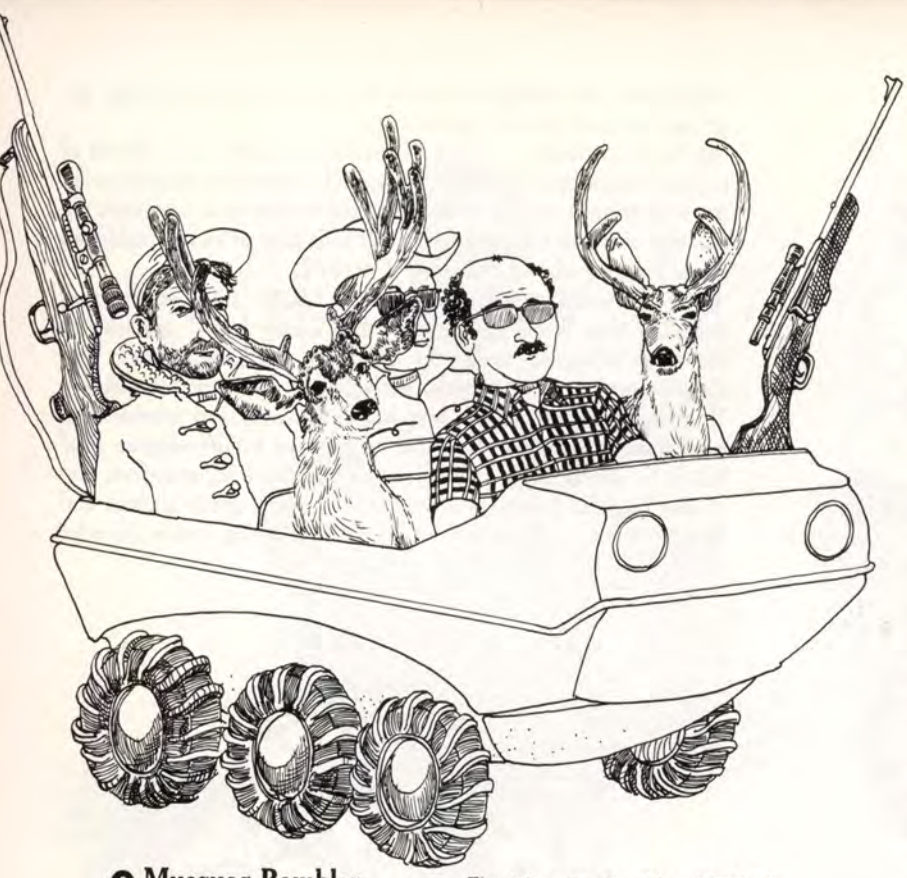
❼ Uniscrambler

❽ Karmabile

The Karmabile: An ultimate development of Honda's little three-wheel funcycle, but with the heaps of horsepower of a Harley hog mated to Japanese and German components.



❻ Casey Jones



❾ Musqueg Rambler

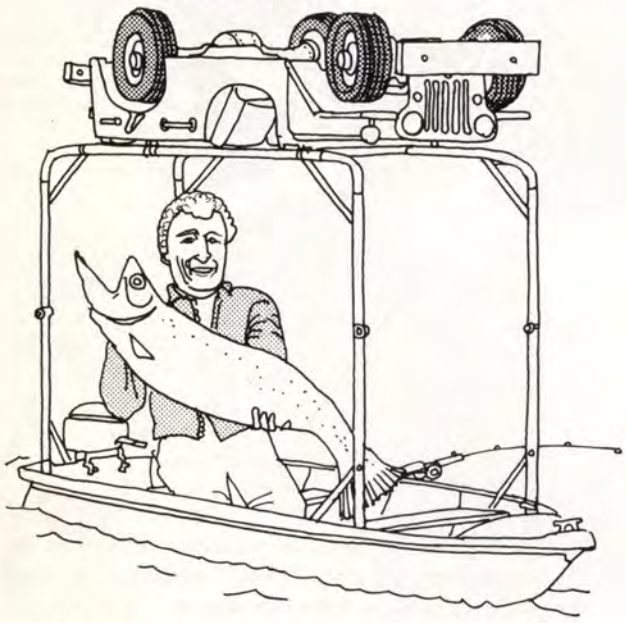
The Musqueg Rambler: Not built for speed, the Rambler can still hit 45 mph on the road. Propeller unit gives an adequate four knots in smooth water. Six-wheel drive differs in engineering concept from that of the Casey Jones.

❾ OVER LAND AND WATER—AND ANYTHING IN BETWEEN.... The first fruit of a five-year industrialization and export plan, the Albanian-built "Musqueg Rambler" should be hitting our shores in quantity by 1976. Powered by the Italian Alfa-Romeo three-liter, this versatile little runabout will appeal to the sportsman who agrees that the shortest distance between two points is the proverbial straight line.

❿ "INCONSPICUOUS CONSUMPTION FOR THE MAN WHO HAS EVERYTHING ELSE...." With the flip of a handspike the "Convertaboat" pops from backwoods trail to nearby lake or stream, bringing the quiet joys of fishing to previously inaccessible or awkward waterways. Though the concept dates back to World War II and beyond, the weight and price are new—and mercifully light for the buyer who has specialized needs in mind. Available in kit form or fully assembled, drive-or-float-away configuration, from Captain Billy's World-Wide Novelties, Box 1126, Thetford Center, Vermont.

⓫ ". . . SOLES TREAD GENTLY ON THE EARTH. . . ." Original plans for the "Deerstalker" were developed for the moon-probe program nearly ten years ago, and while impoundment of funds by President Nixon killed that early spacewalker, it remains one of the most startling and practical "spin-offs" from the billions invested in space research. A remarkable demonstration of the contributions of advanced technology, the Deerstalker may find its first important and general use in patrolling the Alaska Pipeline. Popular versions are now on the drawing boards, though at present only the Mark I (shown) is available.

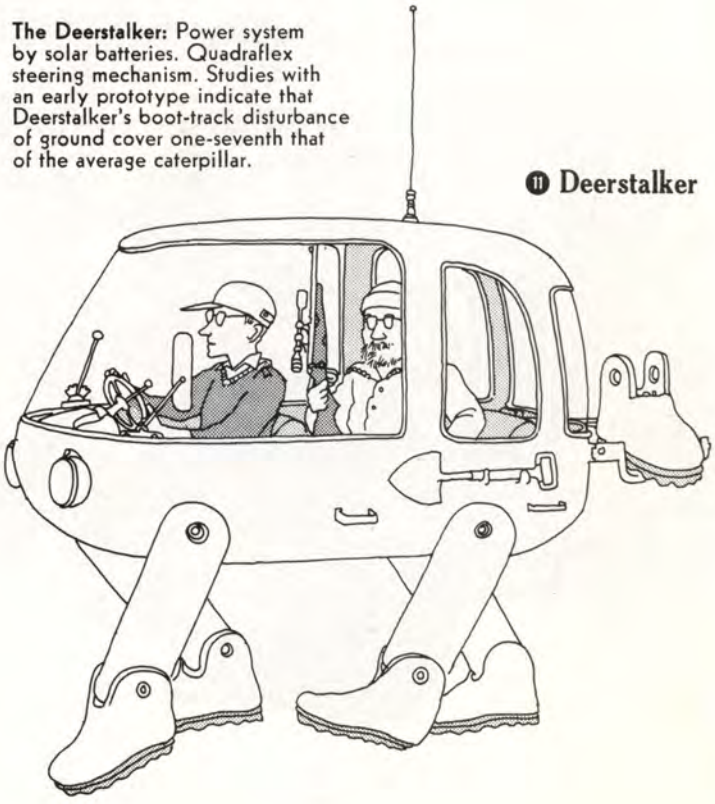
❿ Convertaboat

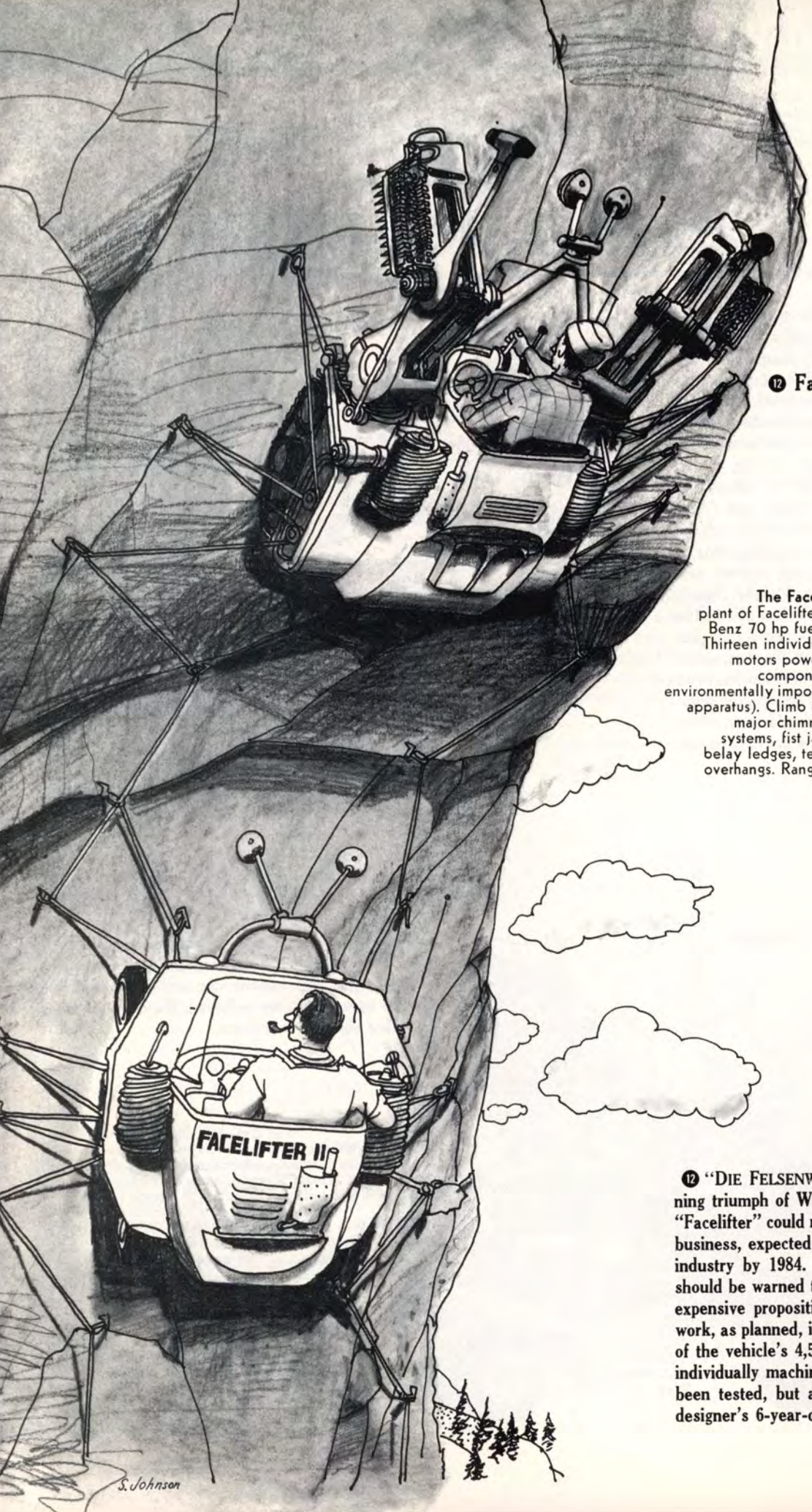


The Convertaboat: Exquisitely designed 60-volt electric power system is manufactured in Taiwan by the Free China Development Corporation (a subsidiary of the Taiwan Tea & Trading Co., Ltd.).

The Deerstalker: Power system by solar batteries. Quadraflex steering mechanism. Studies with an early prototype indicate that Deerstalker's boot-track disturbance of ground cover one-seventh that of the average caterpillar.

⓫ Deerstalker



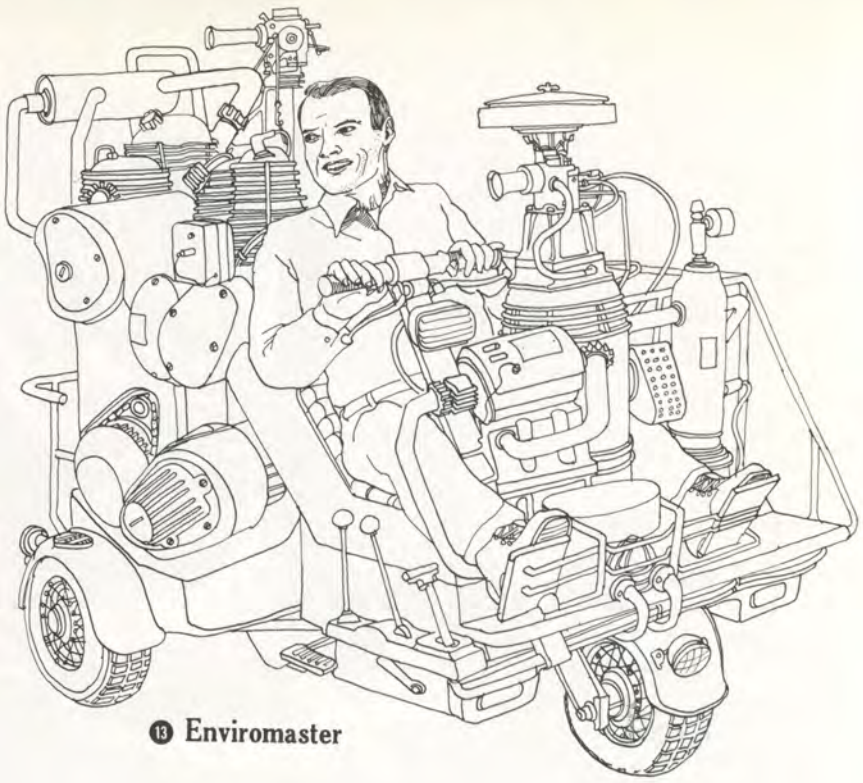


⓬ Facelifter

The Facelifter: Basic power plant of Facelifter is the Mercedes-Benz 70 hp fuel-injection engine. Thirteen individual 3-7 hp electric motors power various climbing components (including the environmentally important piton-removal apparatus). Climb capability includes major chimneys, shallow crack systems, fist jams, chickenheads, belay ledges, tension traverse, and overhangs. Range—5.6 to 5.11+.

⓬ "DIE FELSENWANDSTEIGEMASCHINE...." A stunning triumph of West German Alpine technology, the "Facelifter" could revolutionize the mountain-climbing business, expected by some to be the largest outdoor industry by 1984. Potential investors and customers should be warned that the Facelifter is going to be an expensive proposition, even if most of the assembly work, as planned, is done by cheap Libyan labor. Each of the vehicle's 4,576 moving parts will at present be individually machined. A full-scale model has not yet been tested, but a small prototype, operated by the designer's 6-year-old son, successfully negotiated the

The Enviromaster: Operator may utilize 76 systems and subsystems either in sequence, unilateral isolation, or simultaneous manipulation. Power units range from simple 1-cyclinder 2-cycle to modified gas turbine. (Void where prohibited.)

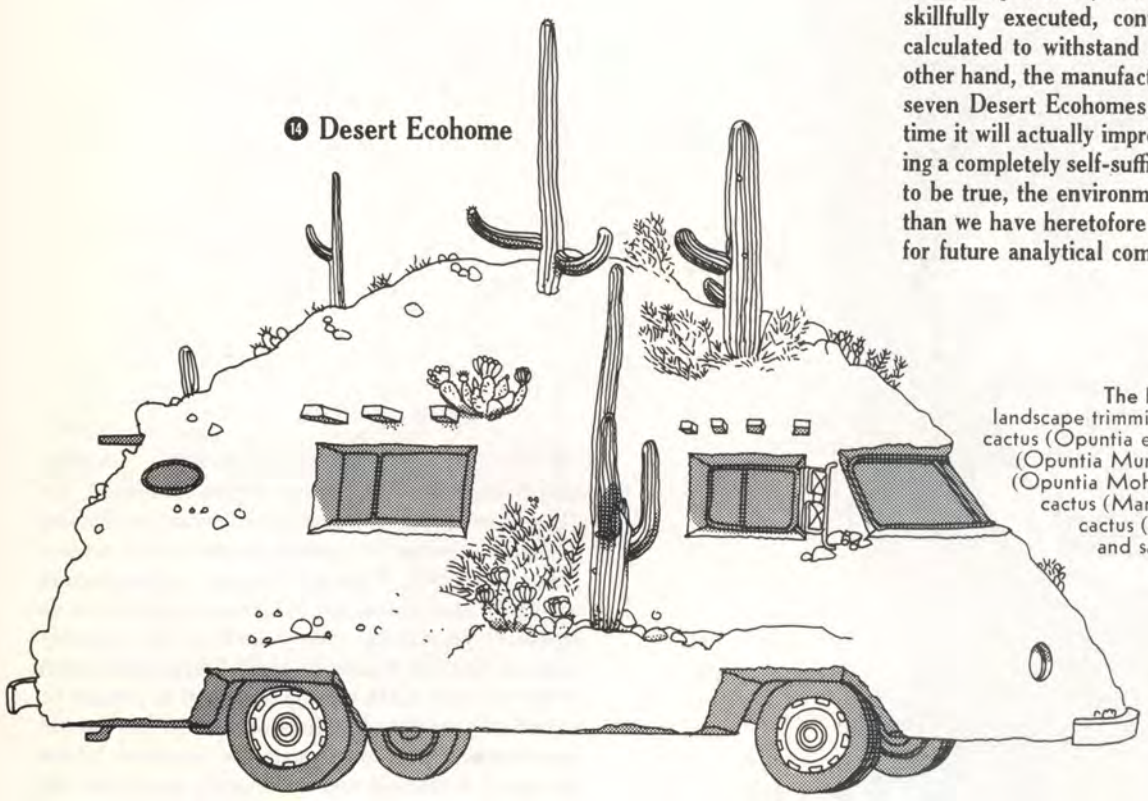


⓭ Enviromaster

Matterhorn from the Italian side in the early summer of 1973.

⓭ "TOMORROW IS HERE. . . ." After successful trade negotiations with the U.S.S.R. opened a new market for American investment, Romania leaped into the recreational vehicle sweepstakes with its startling "Enviromaster," designed by an international committee of Balkan machinists and engineers with the financial backing of I.T. & T. Typical East European production-line difficulties have limited output to only eleven partially working models so far, but the industry at large is toying with possibilities. Arizona test driver Roger T. H. Whitney put his Enviromaster through the following paces within four days in the late spring of 1974: He traversed the Pajaro Dunes, entered and won a hare-and-hound race on the Mojave Desert, forded the Gila River below Roosevelt Dam, climbed to the top of the San Francisco Peaks, scarred four prehistoric intaglios, joined and survived the Santa Ana Freeway commuter rush, won a drag race at midnight on Phoenix's Ninth Street, and puttered down to the shopping center for groceries. "Boy," he said later, "boy, this is some machine. I mean, it's a machine to end machines."

⓮ "THERE'S EVEN LIZARDS ON THE ROCKS. . . ." The manufacturer (Geronimo Industries of Scottsdale, Arizona) tells us that the "Desert Ecohome" is a fully-equipped motorhome built to the highest automotive standards and designed to blend almost unnoticed into the desert landscape. What the manufacturer does not tell us is that the shell's "full equipment" includes only a stand-up shower, and that the desert design, while skillfully executed, contains living plants not well-calculated to withstand general highway use. On the other hand, the manufacturer claims that if as many as seven Desert Ecohomes are gathered together at one time it will actually improve the environment by creating a completely self-sufficient ecosystem. If this proves to be true, the environment may well be more mobile than we have heretofore reckoned. Watch these pages for future analytical comment.



⓮ Desert Ecohome

The Desert Ecohome: Standard landscape trimmings include thorny-fruited cactus (Opuntia echinocarpa), Munz cholla (Opuntia Munzii), Mojave prickly bear (Opuntia Mohavensis), Alverson nipple cactus (Mamillaria Alversonii), barrel cactus (Echinocactus acanthodes), and sahuaro (Cereus giganteus). Shipped guaranteed live.

A Dam Dream and Quaking Reality

The Fault at Warm Springs

THE DAYS are not long since past when the damming of a river in the name of progressive public works was accepted without question. A dam was a simple example of man's beneficent improvement upon nature's lack of foresight. Then it occurred to even untrained observation that upstream and downstream and within the man-made reservoir itself values were lost that had not been reckoned into the work itself. So then we came to the famous—or infamous—"cost-benefit ratio" of the Army Engineers or the Bureau of Reclamation or of state and local water engineers. And the "cost-benefit ratio" in its turn has been seen to involve curious costs and strange ratios.

We have not yet seen the last of the more damaging engineering boondoggles and even in this issue of the *Bulletin* we must take serious note of the attempt to turn the Red River Gorge of Kentucky into a "recreational" lake that will either save or threaten a few farms downstream.

As it has been with the Red River Gorge, so it has been with a couple of slim creeks in Sonoma County, California, during these last years of the great dam builders. Keep in mind as this "little" project is considered: the dam is to be one of the great earthworks of America, greater than the dam that could destroy the Red River Gorge.

The Sierra Club and other environmental groups have fought the Warm Springs project and its spurious "benefits" since its inception. Marin County citizens, who would be the major beneficiaries of the stored water, have voted resoundingly against the expansion that would make the water essential. The flood-control "benefits" and recreational "benefits" are largely illusory.

Yet the project ground relentlessly ahead —until a young State of California seismologist, Roger Greensfelder, pointed out that the dam was to sit right on top of an earthquake fault. With even the public safety threatened, the entire case for the building of this superfluous dam is now reopened to the forces of public pressure and public sense.

THE PROPOSED Warm Springs Dam, a 319-foot-high earthfill dam, would cost $114 million and create a 381,000-acre-foot lake in Sonoma County, California, about 75 miles north of San Francisco. Located on Warm Springs Creek, a tributary of the Russian River about 14 miles north of the town of Healdsburg, the dam would straddle one inactive earthquake fault and would be within a few miles of two other faults that are known to be active. The dam is intended to provide flood control, recreational facilities, and water storage. Conservationists filed suit last April to enjoin the Army Corps of Engineers from proceeding with the project on the grounds that the project's environmental-impact statement was inaccurate and misleading. The federal district court ruled in favor of the Corps. Since then, construction of the dam has been temporarily stopped by Supreme Court Justice William O. Douglas, pending disposition of an appeal from conservationists now before the Ninth Circuit Court in San Francisco. An attempt by the Sonoma County Board of Supervisors to have the Supreme Court set aside Justice Douglas' stay was rejected by the Court unanimously. The Circuit Court appeal itself has caused the Corps of Engineers to promise to do yet another "dynamic analysis" of seismic problems. Finally, a petition drive by the Warm Springs Dam Task Force has recently forced the County Board of Supervisors to place the proposal on the November ballot for resolution by the county's citizens.

Among the reasons why environmentalists object to the proposed Warm Springs Dam are several shared in some degree by similar projects all over the country: The dam would flood a beautiful agricultural valley, destroy a valuable fishery, drown an Indian archeological site, and might well contaminate the local water supply by leeching out poisonous arsenic salts that are said to be common in the area. But in addition to these environmental objections there is one

GABRIELE VON RABENAU

more: the dam would be located in an active earthquake fault zone. Considering the vulnerability of Californians to earthquakes, it is odd that this objection has largely been overlooked or underrated. Perhaps Californians have simply grown too accustomed to playing seismic roulette, have grown too blasé about earthquakes. (For example, five years after passing a "parapet ordinance," which demands reinforcement of building cornices in order to lessen the danger from falling objects in the event of an earthquake, San Francisco has yet to begin enforcement of the law.) In any case, the possibility of a dam failure as a result of an earthquake simply fails to frighten some people around this state.

Anyone who cannot recall what happens when dams fail should look up two old copies of *Life* magazine in order to refresh their memories. In the December 14, 1959, issue, the pictures and story tell how the five-year-old Malpasset Dam broke, sending downstream a 30-foot-high wall of water that wiped out the French Riviera town of Frejus and killed over 261 people. Houses were smashed; children who crawled under a bed to escape the rushing water were trapped and drowned; those who did not drown told of high waters pressing their noses against the ceilings with barely enough air to breathe. "It was like the end of the world," said one survivor.

The October 25, 1963, issue of *Life* recounts the tragedy of the Vaiont Dam at Longarone, Italy. After two weeks of heavy rains in northern Italy, masses of earth slid off a mountain, sending some 500 million cubic yards of matter into the lake. "A tidal [sic] wave roared over the dam in a wall perhaps a thousand feet high," wrote the correspondent. In its wake, more than 2,000 people were killed. There were no human beings to be seen, no trees, no roads, no animals, just barren land.

Or, closer to home, possibly you remember when the 1971 Los Angeles quake caused cracks to develop in the San Fernando Valley's Van Norman Dam. Had

Continued on page 39

WASHINGTON REPORT

House Score: Local Lobbies, 211; Land-Use Legislation, 204

Brock Evans

AFTER MONTHS OF MANEUVERING, position switching, and some of the most intense lobbying ever seen on Capitol Hill, the land-use bill was defeated in June on a close 204-211 vote. Like so many other issues, land use had become entangled in impeachment politics. As Congressman Morris Udall, the prime House sponsor of the bill, declared in a bitter press conference the day after the House vote, "The tragedy of the land-use bill is that if it had been voted on six months ago, it would have passed. The President's switch to the conservative side because of Watergate spelled its defeat."

The President's surprise switch, which I discussed in the April column, was responsible for the House Rules Committee's rejection of the bill last February. This action precipitated a strong response from the coalition favoring land-use legislation, and as a result the Rules Committee on May 15, reversed its ruling in an 8-7 vote, thus permitting the bill to come before the full House.

The powerful economic interests opposed to land-use planning struck back with an intensive mail campaign to Congress, a campaign characterized chiefly by distortion. "The bill will take away private property rights," opponents claimed. "It will mean that some bureaucrat in Washington will be able to dictate the location of every new feed lot in Missouri. . . ." Such statements were typical of the mythology broadcast through the land by opponents to the bill. It made no difference that the bill would have done no such thing. The legions of the "liberty lobby," the John Birch Society, and other right-wing organizations poured into the fray, so that in the last weeks of May, Congress was buried in an avalanche of mail hostile to the legislation. The House leadership, who feared that the bill would be defeated by mail alone, put over the vote —originally scheduled for May 28—to June.

At the same time, environmentalists, along with other groups in the coalition favoring land use, increased their activity, meeting in daily strategy sessions, mapping out and implementing their campaign, contacting news media, and enlisting the help of volunteers in the field. This last point characterizes the difference between the way that environmentalists and the big industrial groups operate in Washington. Having no money or promises of money to wave around, the only strength environmentalists have here in Washington is you, the people, out there. An environmental lobbyist tries to learn what a congressman thinks about a particular issue, what bothers him about a piece of legislation, and what information he may need in order to make an intelligent decision. It is then essential to see that the congressman is provided with helpful information, and to make certain that he hears from his constituents.

In the case of the land-use bill, we visited each member of the House at least three times, trying to find out where he stood and what information he required. The rest of the time was spent on the phone—to Boston, Cleveland, Alabama, San Diego, and every place in between.

One week before the final vote, mail was still running heavily against the bill, and almost 150 congressmen had not yet made up their minds—an unusually high number. So we redoubled our efforts: the Sierra Club sent a special mailing to 65,000 of its members. Towards the end of the week, finally, mail from environmentalists began to pour

in. Even though we knew the vote would be close, there now seemed a chance to squeak through.

The day before the vote, the Administration played its last trump card: Secretary of the Interior Morton announced that he joined with the President in switching his support from the Udall land-use bill to the phony, so-called compromise bill offered by Congressman Sam Steiger (R-Arizona), a staunch opponent not only of land use, but of all environmental legislation. Thus Morton was able to claim he was for land-use legislation, while conveying at the same time the message to land-use opponents that he was really on their side, since everybody knew that the Steiger bill was not a serious alternative. Because it was essential that a fair number of Republicans join with liberal Democrats on this issue, Morton's switch, timed for maximum effect on these swing votes, was the kiss of death to land-use legislation this year. The Administration reinforced its position by flooding "swing" Republican congressmen with telephone calls urging them to vote against the bill.

We joined the swarm of tourists in the crowded House gallery to watch the debate. The key vote would be on "the rule," that is, on whether the bill should be debated or not. Before a debate can begin, the House must vote on whether even to permit it or not. Thus, a congressman can vote against a bill by voting against "the rule" permitting debate, and later claim to unsuspecting constituents that he was not opposed to the bill itself, but merely to considering it at that time. Opponents of the land-use bill, knowing the vote was going to be close and fearing that if it were allowed to come to debate amendments might be added that would satisfy some of the opposition, adopted the strategy of killing the bill before it could even be discussed.

The debate on "the rule" was spirited and bitter, a clear example of private economic advantage versus the public interest and of distortion and inflamed rhetoric in place of reason and good sense. Congressman Steiger led off by suggesting that the members vote down the bill before it got to debate so that they could all "go home early." Congressman Kazen (D—Texas) appealed to "our proud national history of growth," and extolled the wisdom and alleged "environmental consciousness of the pioneers, who had no restraint on what they could do."

"Trust their wisdom," Kazen advised.

Congressman John Rousselot (R—California) then launched a bitter personal attack on his colleague, Morris Udall. According to Rousselot, the land-use bill was Udall's "gift to environmentalists to help him become President." According to the conservative Rousselot, the bill would deprive property owners of their rights. Apparently he did not read the section of the bill that was written specifically to overcome this objection.

After an hour and a half of debate, the voting commenced. In Congress a buzzer signals the start of voting, after which there are 15 minutes to vote. Remaining time is ticked off on an electronic "scoreboard" in the chamber. When the vote is called, all the names of the members are flashed on a large screen, and as they vote, an "X" appears opposite their names. The running total is also provided so that members can always tell how close the vote is and how much time is left. As members filed in from their offices to vote, they were greeted by fellow members who held their thumbs either up or down, that is, either for or against the bill. Other members milled about the floor, receiving backslaps from their friends who had lobbied them one way or the other on the bill. Then each member went to his own desk and inserted his little voting card into the electronic device that would record the "X" by his name.

For almost the entire 15 minutes, the bill was being voted down by 20 to 30 votes, but towards the end there was a surge of "yes" votes. We were only eight behind, then five, then three, and then, finally, with about ten seconds to go, we were seven behind. That's where it remained. The Republican side began to count off the last seconds and erupted into a great cheer when the final vote was flashed on the board.

So it went. But although the bill died this year, the issue remains alive and will return to haunt Congress next year. It will be a new Congress then, and it seems likely that many anti-environmentalist members will not be returning. But in the meantime, we must not allow any congressman who voted against "the rule" to claim he just did not think the bill was ready for consideration yet. Everyone voting that day knew they were voting on the merits of the legislation itself—and nothing else. Nor should we let spokesmen for the Administration weep crocodile tears over the demise of the land-use bill. Both the White House and the Department of the Interior lobbied heavily against the bills in its last days.

NEWS VIEW

Conservation measures pass

In the June 6 primary election, California voters approved four initiatives that had the strong support of conservationists throughout the state. Among the successful ballot measures was the controversial proposition nine, the so-called "campaign initiative," which is now the toughest campaign-spending and -reporting law in the nation. Proposition nine won by a landslide.

Phillip Berry, the Sierra Club's legal vice president, said that proposition nine, which imposes stringent controls on who can donate to political campaigns and on how much they can donate, "is clearly going to be of benefit to conservationists, if we can hold the law intact against court challenges and attempts to amend it in the state legislature." Proposition nine will probably face court challenges from organized labor and various business interests in the state.

Voters also approved a measure that would allow up to 25 percent of the state gasoline tax to be used for rapid-transit construction and air-pollution control. Formerly, these funds were only allowed to be used for highway construction and maintenance, a situation that frequently led to the construction of unnecessary highways simply because the money was there and had to be spent. "We have now amended the state constitution," Berry said, "but what we have to do next is to change the statutes which outline the formulas for use of gas-tax funds. Present formulas don't allow enough money for proper implementation of the new constitutional provision." The last ballot initiative to divert gas-tax funds to other uses than highway construction failed four years ago after a heavily financed, "last-minute blitz" by the highway lobby, but little opposition surfaced this year. One oil company, Atlantic-Richfield, even actively supported the recently passed proposition.

California voters also approved proposition one, which provided $250 million for state-park acquisitions, wildlife conservation, and local conservation priorities, and proposition two, which appropriated $250 million for the state's share of the costs of constructing sewage-treatment facilities.

EDITORIAL

Michael McCloskey

Myth, Reality, and the Negative Image

THE SIERRA CLUB has practically become a household word. A recent survey revealed that we are one of the six best-known public-interest groups in America today. Nonetheless, the renown is not altogether welcome news. As we have become well known, a mythology has grown up around us—and forces beyond our control have assumed the role of myth-makers.

The myth has us cast in the role of being chronic "aginners," who rise like phantoms to oppose almost every development proposed anywhere. And we are supposed to be endowed with uncanny and almost preternatural powers to block things. We are at once reviled for being so negative and feared for being so powerful. Thus, there are two curiously different sides to the myth.

This mythology has wide currency in small towns and with small businessmen. But increasingly it is being picked up elsewhere, and even some of our own members seem to be infected by it. We have begun to realize that our image is being shaped less by what we say or do and more by the voices of our detractors. Their propaganda has launched a myth that seems to be getting deeply set in the public mind.

Ironically, our public image may be clouded at the very time our image among decision-makers may be at an all-time high. In advocating positions before congressmen, administrators, and in the courts, we have become exacting and professional. We have earned respect as responsible, rational, and knowledgeable advocates. But we have not focused the same energies on defending our good name against the distortions that are rampant among the public at large.

I think we now should. We can no longer afford to let our detractors control the public's impression of us. We need public support if we are to advance further. We should counter every unfair editorial with a letter setting the record straight. We should let every "would-be" adversary know what our position really is and not let him rest content with his own inventions about what he *thinks* our position is. And we should be more careful in accurately describing our positions and putting them in an understandable context. We need to seek out and make new friends.

We need to let the world know that the environmental movement is fundamentally positive, that it is committed to maintaining the health and productivity of the biosphere. Those who would undermine it are the truly negative forces. We seek opportunity for richness and diversity among all life forms. Those who want free rein for man to deplete, pollute, and dominate are embarked upon the most negative course imaginable.

The Club's program is positive. Most of it is directed toward achieving remedial legislation that will set new ground rules to improve our collective conduct toward the environment. Current examples are measures to improve land-use planning and to regulate strip mining. At the same time, we have to defend sound measures, such as the Clean Air Act, from being weakened, and we have to be ready to enter the courts to see that statutes we have persuaded Congress to enact are correctly interpreted and strictly enforced. Most of our suits have this purpose, and in the majority of instances the courts have sustained our contentions. Thus, we are aiding efforts to uphold the law, which surely should be recognized as an exercise of good citizenship (instead of being derided as obstructionism).

Our negative image arises primarily out of our occasional opposition to specific projects—a pipeline, a power plant, a freeway, or subdivision. Yet, most of the projects now in place have been built without any complaint from us or from any other environmental group. And where we do oppose projects, as often as not we merely object siting, routing, size, or failure to install mitigating features. The preponderance of new projects has not drawn our opposition either. For instance, every day the Federal Register carries the names of freeway projects across the country that draw no opposition from us, or anyone else. But if we object to one out of ten, or even a hundred, we are denounced as opposing all freeways, and wanting to stop everything. Everytime this is said, we need to come back with the truth.

Of course, the spectacular disputes like the Alaska pipeline and the SST have reinforced the image of negativism. Yet in both instances we were really seeking a better approach

Continued on page 39

Atom power plant leaks radioactive materials into Mississippi River

The latest nuclear accident to come to the public's attention occurred in early June at Cordova, Illinois, where a ruptured six-inch pipe at the 800-megawatt nuclear power plant jointly owned by Commonwealth Edison and Iowa-Illinois Gas and Electric resulted in the release of radioactive materials into the Mississippi River. No injuries were reported, but the accident caused an automatic shutdown of the entire plant and triggered the fire protection system.

According to the Associated Press, the plant was "awash with radioactive water, some of which leaked into the Mississippi River through the drainage system." A spokesman for the company, however, assured the public that "the water in the Mississippi River has a low level of radioactivity, but is not considered hazardous by the Atomic Energy Commission. If someone drank the water, aside from the dirt, it wouldn't hurt them."

Maybe not, but the Atomic Energy Commission recently admitted that 861 "abnormal events"—including some radioactive leaks—occurred in 1973 in the 42 nuclear power plants now operating in the United States.

"When will the utilities start owning up to the problems they are having with the operation of nuclear powerplants?" asked Larry E. Moss, associate conservation director of the Sierra Club. "We need better safety and operating standards for nuclear plants, rather than the false advertising about 'safe, clean nuclear energy,' that the utilities are running all over the country."

McCloskey cites potential for energy recovery from solid wastes

Sierra Club Executive Director Michael McCloskey told participants in the Club's Land-Use Planning/Solid-Waste Management Workshop at the University of California, Berkeley, that "The usable energy content of nonagricultural wastes produced by most communities currently amounts to two to three percent of the communities' total energy needs over a year." McCloskey cited the Ford Foundation's Energy Policy Project finding that the nation could provide five to six percent of its energy supply by recovering only 30 percent of the energy wrapped up in solid wastes.

"Because of environmentalists' long concern over keeping solid wastes from being disposed of in environmentally vulnerable areas," McCloskey said, "land planners became fascinated with finding new and

more acceptable dumping grounds. Now, however, we want neither the stripping nor the dumping. The 'waste' is a resource which should be recovered for its energy and metals, instead of being wasted."

Nixon wilderness proposal: fifteen new areas, six million acres

President Nixon sent to Congress a message in which he proposed 15 new additions to the National Wilderness Preservation System totaling about six million acres. The recommended additions are as follows: *Crater Lake National Park*, Oregon, 122,400 acres; *Havasu*, California, 2,510 acres; *Semidi*, Alaska, 256,000 acres; *Hawaiian Islands*, 1,742 acres; *Crab Orchard*, Illinois, 4,050 acres; *Zion National Park*, Utah, 120,620 acres; *Katmai National Monument*, Alaska, 2,603,547 acres; *Rice Lake* and *Mille Lake*, Minnesota, 1,407 acres; *Glacier National Park*, Montana, 927,550 acres; *Red Rock Lakes*, Montana, 32,350 acres; *Olympic National Park*, Washington, 862,-139 acres; *Tamarac*, Minnesota, 2,138 acres; *Rocky Mountain National Park*, Colorado, 239,835 acres; *Missisquoi*, Vermont, 620 acres; *Unimak Island*, Alaska, 973,000 acres.

House votes more funds to flood northern Maine

The Army Corps of Engineers had its way again when the House of Representatives voted in June to keep $800,000 in the Public Works Appropriation Bill for preconstruction planning for the controversial Dickey-Lincoln hydroelectric project proposed for the St. John River in northern Maine. The 201-186 loss came on an amendment offered by Massachusetts representative Silvio Conte that would have deleted the appropriation.

But according to Sierra Club director Paul Swatek, "We have only begun to fight this ridiculous proposal and the outdated mentality that lies behind it." Swatek characterized the project as "a boondoggle in the classic mold," pointing out that it involves an earth-fill dam larger than Aswan, but with the capability of providing only a small fraction of the power now produced by fossil-fuel plants.

At stake is 100,000 acres of remote, wild land that now provides invaluable wilderness, wildlife habitat, and recreational opportunities. The upper St. John and its tributaries comprise one of the finest whitewater canoeing rivers in New England and one of the best trout streams in the entire country. The surrounding countryside also has served as a wildlife "reservoir" from which species such as the moose have been transplanted to their former habitats throughout the state.

But despite the good reasons *not* to dam the St. John, the plan has proceeded anyway because the Maine delegation to the House, along with other New England congressmen, have actively supported the project. According to Swatek, these congressmen have been "badly misled by the Army Corps' phony benefit-cost analysis and by unscrupulous distortions of the facts by dam supporters." Swatek summed up Congress' attitude: "If it generates electricity, build it, regardless of the cost to either the taxpayers or to the environment."

Critics of the project had pointed out earlier that the cost-benefit analysis assumed a ridiculously low 3.25 percent interest rate and ignored the loss of the wild river and of wildlife habitat while counting at the same time the flat-water recreation benefits the project would supposedly produce.

The Sierra Club's Northeast Regional Conservation Committee strongly reiterated the Club's 1967 policy calling for opposition to the commitment of further federal funds for the Dickey-Lincoln project.

REGIONAL REPS REPORT

Alaska: Egan's Folly

RECENTLY, Alaska Governor William Egan was interviewed by *U.S. News and World Report* on Alaska's future. The governor, who has held power for all but four years of Alaska's 16-year statehood—and who is this year seeking his fourth four-year term—predicted that the state would have a budget surplus of three to five billion dollars by 1984, as a result of oil revenues from the North Slope.

Governor Egan was asked, "What do you say when people claim that Alaskan development will destroy the unique pioneer life style of the state?" His reply is worth quoting:

"Now, Alaska is a vast place—586,000 square miles. Every one of the people who say they want to keep it a wilderness could be out there, and we couldn't find them unless they told us where they were going.

"Seriously, this is one thing about our planning—by the state, with the federal government and the native corporations here: we must be ever conscious of the need for proper land-use planning and land-classification procedures that provide sound development in concert with national refuge and wilderness qualities.

"And the fact is that Alaska always will have more natural land, more natural lakes and hills than probably all the rest of the states put together. There will always be 225 million acres in federal land, belonging to all the people of the United States."

This is the usual sort of statement from the governor that so dismays Alaska conservationists. Notice, for example, the distinction drawn between "the people who say they want to keep it a wilderness" and "we," meaning the governor and his coterie of miners who set the state's natural resource policy and who have no use whatsoever for wilderness.

Then there is the ritualistic reference to land-use planning. The Egan administration is currently a partner in the Federal-State Land Use Planning Commission, but its participation was originally part of its public relations campaign for the pipeline, a piece of window-dressing designed to convince the naive down in the "lower 48" that it cared about Alaska's public lands. Its motive for participating now that the pipeline has been authorized is to prevent any land-use planning that would interfere with its profoundly anti-environmental objectives. Egan stacked the state half of the commission with administration yesmen, and with a little help from their friends on the federal side, the commission proceeded to recommend that Interior's 83 million acres of national-interest-land withdrawals be done away with.

And, while the state members of the commission still behave as if it is all on the level, the Egan administration is continuing to prostitute the state's natural resources. Despite the billions from the North Slope, it recently sold, for $25 million, oil and gas leases in the center of a crab sanctuary in the scenic, fisheries-rich Kachemak Bay, after refusing to hold a public hearing requested by outraged Cook Inlet fishermen. It permits logging operations on state-selected land by Japanese timber interests that by comparison make the worst Forest Service "shows" in southeast Alaska look like models of scientific silviculture. Its Department of Highways is currently attempting to build roads in proposed national parkland in the heart of the Wrangells, in the lower, sublime Copper River Valley, in a key area of the proposed Gates of the Arctic National Park, and in proposed parkland on the Seward Peninsula. There may be a temporary respite from these roads this

election year, since Alaska Natives along the proposed rights of way oppose them because of the threat to their subsistence hunting and fishing.

The Egan administration has opposed every wilderness area proposal by the Bureau of Sport Fisheries and Wildlife and the National Park Service. It has intervened in support of the Forest Service in the Admiralty Island timber sale, currently under court challenge by the Sierra Club. An infallible guide to the wrong side of any environmental issue is to note which side the Egan administration is on.

This year's gubernatorial election is the most critical in the state's young history. In terms of the fate of 80 to 100 million acres of national-interest lands in Alaska, it is also one of the most important elections in the nation. For the governor will be in a position to have a significant influence in the congressional deliberations over the next four years involving these lands. He will also have a tremendous weight in the decisions surrounding new pipeline corridors, rampant oil and gas development, whether or not Alaska's *de facto* wilderness is to be indiscriminately roaded out of existence, and whether the coalition composed of the Forest Service and Japanese timber interests will continue to ravage the rainforests of southeast and southcentral Alaska.

Egan is unopposed for renomination. On the Republican side of the ticket, former governor and secretary of the Interior Walter Hickel is attempting to retake the Statehouse. (Hickel ousted Bill Egan in 1966.) Hickel is opposed in the primary by former state Senate president Jack Hammond, a maverick pro-environment guide, poet, and commercial fisherman from Naknek on Bristol Bay. Hickel has continued to polish his image as an "environmentalist" in the "lower 48," but has not taken pro-environment stands on current issues in Alaska. Hammond, extremely popular with the state's fishermen and conservationists, lacks the base in Anchorage that Hickel has, and the recognition his better-known opponents enjoy. Nor does he have the party organization behind him, as Hickel does. Nevertheless, reports are that Hammond is making steady progress in his effort to overtake the former Interior secretary in the August primary. *Jack Hession*

Southwest: A Brown Study in the Blue Sky

In 1970, national attention was focused on the so-called Four Corners power plants. At that time, we thought of the problem primarily as consisting of six plants: either in operation, under construction, or planned. The first of these was the notorious Four Corners Power Plant near Shiprock, New Mexico, whose massive emissions of air pollutants seemed to be an example of what to expect all over the Southwest. Also at issue was the energy industry's interest in strip mining the abundant coal reserves of the western states. More recently, the concern has been centered on the Northern Great Plains—but in the meantime, what has been happening in the Southwest?

On the positive side, the public outcry of 1970-71 materially promoted the installation of better air-pollution-control equipment at the operating plants. More importantly, it created an atmosphere where the political acceptability of further similar plants was in doubt, at least in some states.

The bad news, however, is that the first units of three new plants have gone "online," and that observations of one of these, the Navajo Generating Station near Lake Powell in northern Arizona, indicates that even with much-improved air-pollution-control equipment these plants will still have a substantial adverse impact on the blue skies and 100-mile visibility for which the region is famous. With only one unit in operation, the Navajo Plant is the source of a distinct brown layer easily visible almost every morning, a layer that will undoubtedly be much browner when all three units are going full blast in 1976. Equally offensive is just the mere presence of this massive industrial installation. The strobe-lighted 775-foot-high stacks are the most conspicuous landmark for miles around and compete with the sandstone cliffs and buttes for the visitor's attention.

Particularly alarming is the power companies' increasing interest in southern Utah. Here, weak air-pollution regulations, friendly state and local officials, and extensive coal reserves continue to attract large coal-fired power plants. Present plans call for four more such facilities to be constructed in the next ten years in the heart of one of the greatest concentrations of scenic resources and national parks in the United States.

Planning is furthest along on the proposed Kaiparowits project, a 3,000-megawatt plant that would be jointly owned by Southern California Edison, San Diego Gas & Electric, Arizona Public Service, and the Salt River Project. Last summer, Interior Secretary Morton rejected applications to construct this plant on Nipple Bench, a few miles north of Lake Powell. However, pressure from the utilities and Utah politicians have revived it. Two sites are under serious consideration—the original Nipple-Bench site and another on Four-Mile Bench. At the latter location, this plant would be readily visible from most of the overlooks in Bryce Canyon National Park.

Other proposals include a 500-megawatt plant in Warner Valley, 20 miles southwest of Zion National Park. The coal would come from the Alton Coalfield, which forms a horseshoe around Bryce Canyon National Park. This same coal would be used to fuel another plant, owned by Nevada Power Company, to be located in Arrow Canyon north of Las Vegas.

In the past few months plans have been advanced by Utah Power and Light (UP&L) and the Los Angeles Department of Water and Power (LADWP) for two large plants in the Escalante Region. The UP&L proposal could ultimately involve 2,000 megawatts while LADWP has joined with other municipal utilities in Los Angeles and southern Utah to build a 3,000-megawatt plant. There is some competition between these two groups for water and plant sites. Both seek water from the Escalante River and propose the construction of a dam in this highly scenic wilderness canyon. Sites under consideration for the plants themselves include two a few miles west of the Escalante River, another seven miles south of the town of Escalante, and two located near Caineville, about eight miles east of Capitol Reef National Park.

Although early attention was focused on air pollution from power plants in the Southwest, there is now a much greater awareness of additional problems. Particularly ominous is the five- to tenfold population increase in the affected counties that will accompany these plants. The Kaiparowits project alone will bring an anticipated 15,000 new residents to the area. The end result could be the conversion of what should be a parkland into an industrial park instead. *John McComb*

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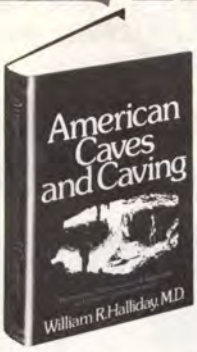

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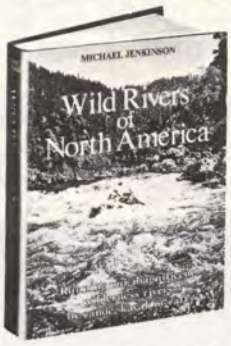

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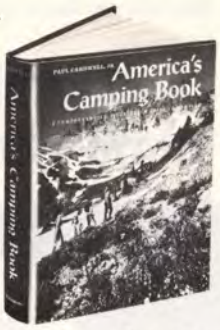

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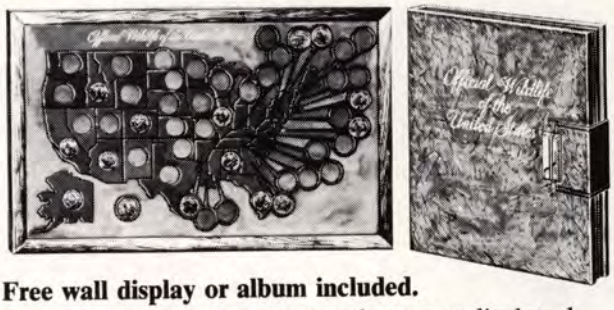

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Engineering the Red River Gorge

WENDELL BERRY

I WAS IN VERMONT, and several of us were sitting on the porch of an old farmhouse before supper. Because I am from Kentucky my hostess mentioned that she and her family had recently gone hiking in the Red River Gorge, and had become lovers of that place. While evening darkened over the Green Mountains, we spoke of beauties and pleasures indigenous to a cliffed wilderness a thousand miles away. And we spoke uneasily of the possibility that it may soon be ruined by a Corps of Engineers' dam-building project.

Such an incident is not unusual. Neither is the concern, for there is a sort of unorganized club composed of the lovers and the would-be protectors of the Red River Gorge. Starting from a nucleus in Kentucky, this club now has branches all over the country. Its members are apt to encounter each other unexpectedly and in odd places, but the double theme of their conversations has been long and wearily rehearsed: The gorge is for many reasons a precious gift of nature, but can it be saved? To date, no one has been sure of the answer, and the struggle for the gorge has taught us how little we may trust any prediction based simply upon good reason.

At stake is a 65,000-acre forestland of natural bridges and arches, sculptured cliffs, steep streams and waterfalls—unquestionably unique in terrain, in natural beauty, and in the abundance and variety of its plant and animal life. In defense of the gorge is the part-time, overworked volunteer effort that we know as the conservation movement. In support of the dam are the full-time bureaucratic inertia of the Corps of Engineers, and Kentucky political morality, which usually has had the clarity and viscosity of cold bacon grease. It has already been a long fight.

The Red River Dam was authorized in the Flood Control Act passed by the 87th Congress on October 23, 1962. For more than a decade the opposition has steadily grown both in numbers and in the strength of its arguments. It has sent its representatives to public hearings held by the Corps, and to government offices and committee rooms in Frankfort, Kentucky, and Washington, D.C. Experienced hikers and campers and canoeists have testified that nowhere else in the country is there such a place as the Red River Gorge. Biologists have testified that the gorge shelters associations of species that cannot be duplicated anywhere else. There is not a single argument for the dam that is not open to challenge, and competent witnesses have testified in opposition to the project on virtually every point at

Yet another construction boondoggle of the Army Engineers threatens yet another jewel of American scenery and recreational potential.

Wendell Berry is Professor of English and author of the novel, Memory of Old Jack *(1974). All photographs by Charles Andre.*

The Trillium grandiflorum *of the Red River Gorge*

issue. Moreover, a large, vocal, and well-organized opposition has grown up among the people of the Red River area. And yet, 11 years and so much effort later, the arguments are still waiting at the doors of those who most need to hear them.

Meanwhile we have a Draft Environmental Impact Statement issued by the U.S. Army Engineer District of Louisville, Kentucky, which was issued June 25, 1973. This clumsily organized and incoherent document manages to say that the social, economic, and environmental benefits of the project will be great, and the costs and damages negligible—regrettable, to be sure, but necessary to the "National Economic Efficiency."

"Red River Lake," the statement explains, "was formulated to determine that scale of development and combination of project functions which would provide the most efficient increase in the nation's output via water and related land resource developments. Specifically this objective is concerned with: increased crop production, expanding recreational opportunities, reducing the disruption of economic activity due to flooding, and provision of urgently needed water supplies, subject to economic efficiency constraints."

The cost-benefit ratio of the project is two to one, according to the statement. Furthermore: "Total average annual benefits of $2,274,000 accrue from the project purposes. . . ." Readers will note the confidence implied by the use of the present tense: This is computer prophecy; bureaucrats and army professionals now speak of the future as confidently as did Isaiah. The convinced will be pleased that this is to be no merely local bonanza. The benefits of the project will be spread widely (if somewhat thinly) among residents of the Ohio River floodplain between Carrollton, Kentucky, and Cairo, Illinois, who are to enjoy "flood control benefits" totaling $81,800 per year.

Cecropia moth

The impact statement also displays a most salutary concern for human life, implying that the Red River Dam will greatly reduce the likelihood of death by drowning. "There have been no deaths reported," the Corps concedes with apparent regret, "but the danger is always present."

That is not all. As if it has not already gone to extremes in its eagerness to safeguard the environment while upholding the National Economic Efficiency, the Corps fearlessly dives from the height of fantasy into the rocky shallows of outdoor esthetics. Under the heading of Environmental Enhancement, it announces that "From the standpoint of visual contrast and diversity, the landscape lacks the esthetically appealing water-land contrast, which would be provided by the Red River Lake." This judgment, of course, overwhelms the entire discipline of esthetics. It is the first revolutionary doctrine espoused by the American Army in nearly 200 years.

And what about the adverse environmental effects? Well, some living things that now inhabit the Red River Gorge will obviously have to be sacrificed in order to make room for 1,546 acres of water—but never fear: "Some plant and animal communities now in the area of the flood control pool would be replaced by communities of species better able to adapt to periodic inundation and local changes in temperature and humidity." What we are going to have even on this score, then, is an *improvement.* There are many ways this statement could have been made. The Corps' version is remarkable for its implied moral judgment *against species*: Those unable to adapt to human purposes *should* be replaced by those "better able to adapt." The law of the survival of the fittest is thus eased upon us as a policy. It has been applied also, one must assume, to the 55 families ("family units" the Corps calls them) that the statement acknowledges will be "affected." In Kentucky it is by no means pointless to ask: How would the Red River Gorge be "affected" if these 55 families owned the controlling stock in Peabody Coal Company?

The issues I have dealt with so far have had to do largely with the Corps' language, which is typical of the speech of an overeager salesman. To begin with, one might argue that the impact statement's obvious stooping to salesmanship is in itself an issue of considerable importance. But this is *not* just sales talk. The passages I have cited are patently the nigglings of people desperately seeking to justify

Barn owl (Tyto alba)

a project that they conceived in bureaucratic self-interest. Initially, they did not foresee any need to justify the project; probably, even now they suspect it cannot be justified. And they have long been committed to implement the plan whether it is justified or not. People who are genuinely practical and who have a respectable case do not resort to cheap salesmanship, and they do not dabble beyond their competence in such matters as esthetics.

The main thrust of the Corps' argument is economic, and there has been no unwillingness among the conservationists to conduct their defense of the gorge on that line. The projected "annual benefits," according to the Corps, would come mainly from three uses of the lake: recreation (43.5 percent), flood control (41 percent), and water supply (7.5 percent).

Of the three categories, the most questionable is that of recreation. Publicity surrounding the effort to preserve the gorge, as well as a growing appreciation of wilderness values, has resulted in a rapid increase in the number of visitors to the Red River area. In its recently published *Environmental Statement/Red River Gorge Unit,* the Forest Service indicates that recreational use of the area has

already reached the saturation point: "The projected demand for the use of the Red River Gorge portion of the unit exceeds the ability of the resource to withstand the impact without damage. The demand necessitates limitation of visitor numbers. . . ." Acknowledging that the very few miles of roads and trails in the gorge area accommodated 964,000 visitors in 1972, the Corps proposes to increase annual "recreation days" from "an initial estimate of 554,000 to "1,054,000 by the year 2030." This ignores the sharp reduction of recreational value and use that will follow the deterioration of the area by the trampling of so many visitors. It also ignores the inevitable impact of the fuel shortage and inflation.

The issue of flood control is somewhat more complicated. Not even the most avid conservationist wishes to propose the sacrifice of anybody's crop or house or barn to a Red River flood. Nevertheless, the Corps' argument on this issue is far from airtight. The most cursory examination brings into doubt its suggestion that the issue is only a simple choice between flood disaster and Red River Lake.

The strongest citizen support for the dam comes from flood-control advocates in the towns below the dam site: Clay City, Waltersville, and Stanton (which is never flooded). Of these, according to the Corps' statement, Clay City (whose population in 1970 was 974) is "the only community sustaining appreciable damage." Many people in Clay City would be satisfied to have a floodwall instead of a dam to protect their homes. Others, mainly business people and politicians, want the dam in order to protect lands purchased in the floodplain for speculation or development. A curious fact is that new home building has been going on for some time in the floodplain at Clay City, which must indicate either absolute confidence that the dam will be built or utter disbelief in the Corps' flood-damage statistics. (According to the Corps, the urban damage of the maximum Red River flood of record, in February of 1962, amounted to $231,000. That is for the Red River basin as a whole, not just Clay City.)

The beauty of the Red River Gorge is in a cascade of incidents that delight the quiet walker.

Deer mouse (Permyscus maniculatus)

As for flooding of agricultural lands, the case rests upon the July flood of 1950, when, according to the Corps' statement, the Red River basin sustained crop damages of $2,699,000. There is no denying that this is an impressive figure. But it is also the only growing-season flood that the Corps cites. Of the 20 other floods cited by the Corps (1945–1968), there have been none later than April, and only one (October, 1956) earlier than January. Thus the Corps' crop-damage statistics are derived almost exclusively from a single atypical summer flood.

People constructing a straw argument are perforce obliged to grab at straws, and so the Corps' accounting of Red River flood damage includes also a citation of damage to "transportation routes": a maximum of 14 miles alleged to have been damaged by the flood of February, 1962, to the extent of $33,000.

The proposed dam, furthermore, will provide flood control only on the North Fork of the Red; the Middle and South Forks, which will remain undammed, are more subject to flash flooding than the North Fork. Yet, the Corps' flood-damage figures are computed for the Red River as a whole, not just for the North Fork.

Only 7.5 percent of the benefits of the project would come from water supply, so that is a minor part of the argument. It is nevertheless of some interest that Lexington, the only large city to express an interest in Red River water, has firmly indicated that it does not want the water at the cost of the destruction of the river. Alternative sources *are* available. Even if the Red were to be impounded now to supply water to central Kentucky, it could fulfill the need for only about 30 years, assuming that present rates of use will continue. After that, alternative supplies would have to be opened up in any case. The Corps' argument on water supply, then, calls for the permanent destruction of a unique wilderness in order to provide a 30-year stopgap.

The cost of the project, even by the Corps' estimates, has risen alarmingly from $11 million in 1968, to $17 million in 1971, $27 million in July

of 1973, and finally to $31 million at last accounting. The Corps computes the interest on this project at 3.25 percent, an absurdly low figure. Computed at 8 percent—which is what it would cost a private citizen, hence what it *really* costs the taxpayers—the interest on $31 million comes to $2.48 million, which exceeds the Corps' estimated "average annual benefits" by $206,000. The economic "benefits" of Red River Lake may thus be said to be both conjectural and doubtful. The most passionate advocate of the project would have to admit that, in the light of inflation and the energy crisis, all of the Corps' benefit figures are at least debatable.

There is, however, no doubt at all about the adverse effects. Here the testimony of the Corps' statement is thoroughly persuasive: The "seasonal pool would inundate approximately 1,546 acres rich in biotic value"; "it is expected that many [plant] species will be gradually eliminated or substantially altered physiologically"; "the range of the darter species . . . will be reduced"; "the beaver and wild turkeys would not remain"; "migration of species such as muskallunge [sic] and gar will be inhibited." Among the endangered plant communities is a unique beech-sycamore association. The threatened turkey population is acknowledged to have "one of the highest per acre densities in the state." And the Red River is the one remaining waterway where virtually all the original fish species of the upper Kentucky River basin are still to be found together. The only reassurance that the Corps can offer to environmentalists is that all of the threatened species exist elsewhere. It cites no other place in which they exist in these assemblages. That is because there *is* no other such place.

But even more fragile than any of its biological aspects is the character of the Red River Gorge as a whole. That this character would be irreparably violated by the proposed lake is implicit, of course, in every sentence the Corps has written. The gorge, as it is, is itself a unique creature, a species of one, which has been alive for some 60 million years. Though the Corps of Engineers may be slovenly in its justifications, though it may ignore the energy crisis that calls into question all of its assumptions, though it moves mainly in blindness and by inertia, though it depends upon the moral blindness and inertia of others, it would nevertheless destroy the gorge with marvelous deliberation and speed.

If it is not stopped. And the question we have come to again (having first come to it a decade ago) is "How can we stop it?" The prospect seems not particularly bright. No new public forum is being opened. The state's politicians are disturbingly silent on the question, except for Representative Carl Perkins, to whom this project virtually belongs. The public is apparently weary of the issue and is silent. Kentucky conservationists are stymied for want of fighting occasions, avenues of publicity, and support from outside the state. But we believe, still, that the Corps can be stopped and the gorge saved. We believe that there is still enough decency in America, even now, to take this lovely place as a symbol and to preserve it as monument.

Editorial (*Continued*)

to planning—orderly and disinterested planning for land use, energy, and transport. Lacking that, we had to confront the premature projects of self-interested promoters. But as we succeed in changing the ground-rules, fewer *causes celebres* of this sort should arise.

Obviously, our detractors will always be with us. But let us be sure their ranks do not grow larger than they ought to be. Let us not allow charges to go unanswered. We should not acquiesce in becoming a "trade name" for all environmentalists. If we are not involved, we should point that out. We should not let our detractors have free rein in playing semantic tricks with our program by always characterizing it in negative terms. *We* should characterize it in positive terms. And finally, we should do everything possible to make sure that the public receives authentic information from us about our programs, and not just from our critics. In short, we need to launch a campaign to recapture control of our own good name.

Fault (*Continued*)

that quake lasted another three seconds, or had the lake been at its normal level—35 feet higher—as many as 40,000 people living below the dam could have been wiped out. That 6.6 (on the Richter Scale) quake occurred on a fault that had been assumed inactive.

In Montana, in 1959, the Hebgen Dam survived a 7.8-magnitude quake five miles from its epicenter, but a wave overtopped the dam.

In India, in 1967, the filling of the reservoir behind the 323-foot Koyna Dam *touched off* an earthquake of 6.5 magnitude; 180 people were killed.

These examples give some idea of the potential hazards from faults, from landslides, and from dams in general. In earthquake-prone California, one would hope and expect that the various levels of government would be especially cognizant of such dangers. But such does not seem to be the case. For example, at the April hearing on the proposed Warm Springs Dam held in a San Francisco federal district court, when a conservationist charged that landslides were likely to occur around the new reservoir, witnesses for the Corps of Engineers seemed surprisingly nonchalant about the possibility. From a Corps geologist: "There is no information linking earthquakes to any reservoir project in California." Another said the reservoir slopes would be too flat to make an avalanche of major proportions likely. Still another suggested there would be more than sufficient freeboard (the distance between the level of the water and the rim of the dam) for the lake to absorb landslides.

Of even more concern to environmentalists than landslides *per se* is the possibility that Dry Creek Fault, which lies under what would be the dam's right abutment, is active. The Corps claimed it made hundreds of borings and trenches in its extensive investigation and concluded that there is no evidence the fault has been active in recent geological time. Yet a conservationist witness contended that the Corps should have made more extensive geological observations, including subsurface exploration and aerial reconnaissance over a large area, before drawing such a conclusion. If there is any doubt about whether a large fault is active, they said, in California, at least, one must proceed as if it were active. But even assuming that the Dry Creek Fault is truly inactive, unlike the fault that caused the 1971 Los Angeles quake, there is no disputing the activity of the nearby San Andreas and Healdsburg faults. The latter is only a quarter-mile away, and as the experts should know, it is not necessary for a structure to be straddling a fault for it to be severely damaged by an earthquake. A quarter-mile will do just as well.

Government engineers differed with conservationist engineers over the method used to test a dam's ability to withstand a quake. The Corps' civil-engineer witness claimed that the method of testing the Warm Springs Dam by static analysis "remains an acceptable procedure." (Static analysis utilizes a slide-rule method to calculate how a structure will resist the approximate movement of an earthquake, but it does not simulate the actual movement.) This same engineer, however, stated in an affidavit that static analysis "has long been recognized to have serious limitations." Conservationists agreed. They said the design for the Warm Springs Dam should have been tested using the newer dynamic-analysis procedure, which uses a computer model and therefore more closely simulates the actual movement of an earthquake. Finally, the Corps relented: It has now begun a dynamic analysis.

Furthermore, a Corps engineer testified the dam design could withstand three feet of horizontal movement, but another witness, an engineer speaking for conservationists, testified that the dam should be designed to allow for a surface displacement of from six to eight feet horizontally and three feet vertically. Witnesses for each side also differed on the design's structural strength. A geological engineer who testified on behalf of the conservationists said that the amount of strain anticipated in the dam design had been underestimated.

Conflict after conflict, doubt after doubt characterized the hearing. But U.S. District Judge Spencer Williams, former state secretary of health and welfare under Ronald Reagan, denied the preliminary injunction and found the Corps' environmental impact statement adequate. He wrote: ". . . the experts seemed to agree that a safe dam could be built successfully on the site in question. . . ." We must now await the appeals court's decision, or the decision of the voters.

Gerald Adams

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