

# High Country

The Outdoor and  
Environmental Bi-Weekly

# News

Vol. 4, No. 2

Lander, Wyoming

Friday, Jan. 21, 1972

Photo by Ernst Peterson

## Timber Industry "Calls Shots"

Senator Gale McGee, D-Wyo., has charged that "large timber interests continue to call the shots for the Nixon Administration on national forest management policies."

McGee's charge came when it was learned that the Administration had killed a proposed executive order aimed at tighter regulation of clearcutting on public lands after strong protests by industry representatives during a meeting in Washington Monday, Jan. 10.

The decision to kill the order was announced Jan. 13 by an official of the White House Council on Environmental Quality, who said it followed the industry's objections at the Monday meeting in Agriculture Secretary Earl L. Butz' office. William Lake, the CEQ official, said the decision to scrap the proposal was reached by Butz, CEQ Chairman Russell E. Train and Interior Secretary Rogers Morton, according to news reports.

"The Administration's first really solid attempt to face up to the complexity of the clearcutting issue has been thwarted by industry pressure," said McGee. "This development, of course, is also a concrete example of why there was so much concern in the Senate over Secretary Butz' confirmation."

"We've known, of course, that the Administration was highly sensitive to such pressure all along. My own attempts for the past two years to get a blue ribbon investigation of clearcutting have been rejected repeatedly by this Administration even as the question of clearcutting has become increasingly controversial."

McGee, who has introduced legislation that would impose a two-year moratorium on clearcutting pending a full-scale interdisciplinary study of the practice, said he would continue to press for passage of that bill despite the then-pending executive order. Now, he called the legislation "more necessary than ever."

Clearcutting is the practice of leveling all trees in a given forest tract, varying in size from a few acres to hundreds of acres. It is defended by the timber industry and some foresters as a valid silvicultural method in order to permit regeneration of some species of timber. The proposed executive order would have imposed environmental criteria to be met before the clearcutting method of timber harvest could be used on public lands administered by the Forest Service or the Department of the Interior.

McGee noted that the timber industry's primary public objection, stated this week by a representative of the National Forest Products Association, was that the criteria in the proposed executive order would have banned clearcutting in areas of outstanding scenic beauty.

"I understand that statement, as presented in the proposed executive order, went on to include areas where clearcutting would have an adverse impact on intensive recreational use or critical wildlife habitat," said McGee. "But the industry's stand was taken largely on the ground that large areas of forest lands would be barred to their axes on the grounds of aesthetics. The other criteria dealt with more substantive reasons for limiting clearcutting, ranging from the slope, elevation and soil type involved in a given area to water quality and the impact of road construction associated with logging operations."

"Further, my information indicates the now-dead executive order would have moved in the direction of efficiency, imposing the requirement that waste in timbering operations be minimized, and it would have penalized

(Please turn to page 10)



A "mistletoe seed tree" left on Robbin's Gulch, Bitterroot National Forest, Montana. The area was clearcut to "control" mistletoe. Clearcutting on the Bitterroot has brought national attention. It has also focused public attention on the environmental problems engendered by the practice.

## Hearing Held on Spraying

Wyoming rancher Van Irvine, owner and operator of the Diamond Ring Ranch, could lose federal grazing rights if charges of illegal and unauthorized sagebrush spraying are proved against him. That was the opinion of a Bureau of Land Management spokesman at a hearing in Casper on Dec. 21. However, the case could take up to five years to be resolved.

A BLM hearing examiner, Larry Luoma of Sacramento, presided over almost two and one-half days of show cause hearings on the case. The sagebrush spraying incident was reported in High Country News, Oct. 29, 1971. No other state newspaper carried news of the incident until the time of the hearings, Dec. 21-24.

BLM regulations provide for possible revocations of grazing permits on federal lands if other regulations are violated. It is against BLM regulations to spray herbicides on federal lands without authorization.

The Diamond Ring Ranch employed Doyle Vaughan of the Buffalo Flying Service to spray the lands around June 1, 1971. Lee Irvine, son of the owner and ranch foreman testified he had earlier gone over maps of the ranch property and then flown over the lands with the helicopter pilot. He said he must have become confused because of a fence line.

Lee Irvine also testified that he did not know at the time he contracted for the spraying that authorization was needed.

Letters on file with the Bureau of Land Management show Van Irvine had asked for permission to spray the federal land as early as 1968. In one letter dated Sept. 16, 1968, Irvine asked to spray a public land area "... large enough to do us some good. Say 5,000 or 10,000 acres or more?" The BLM had replied by saying that a grazing plan would have to be implemented before further discussion of spraying could be discussed.

Wyoming Game Department biologists had

requested that federal lands in the area which were later illegally sprayed not be disturbed because of importance to game animals.

Dr. Harold Alley of the University of Wyoming was called as an expert witness by the ranchers. Alley has been in charge of sagebrush spraying programs since spraying first began in 1949.

Alley said sagebrush spraying "is always beneficial to game." Further, he alleged that sagebrush spraying had tended to increase game populations. He said game animals do not rely on big sagebrush as much as they do on other species of sagebrush.

Alley's own writings (Big Sagebrush Control, University of Wyoming Bulletin 354R, May 1965) refer to the fact that not enough research has been done to know the full effects on wildlife. He says, "... studies concerning effect upon game animals are limited ... Only limited studies have been conducted on the effect of sagebrush control on sage grouse. Spray program personnel and those who manage game disagree on results. ... There is a definite need for more extensive studies concerning game animals."

BLM spokesmen pointed out at the hearings that they were not being held on the merits of sagebrush spraying. Rather the hearings were to determine if the Diamond Ring Ranch was guilty of violations of federal regulations.

The Diamond Ring Ranch may be guilty of other violations stemming from applications to spray deeded lands and subsequently receiving \$2,500 of public funds. The ranch applied to the Natrona County Agricultural and Stabilization Committee and received the payment on a warrant paid July 29, 1971.

There has been no public statement concerning investigations or charges stemming from the payment.

More than half the lands for which ap-

(Please turn to page 10)



2—High Country News

Friday, Jan. 21, 1972

# HIGH COUNTRY

By Tom Bell

The stories I liked best as a kid were those enchanting tales of animals, horses, dogs, and rugged men. I can remember them first as my mother read them to me, and later through a procession of teachers at the one-room country school. I looked forward with almost as much anticipation to the 10 or 15 minutes of story-time after the lunch hour as to the hour itself.

And like most boys, I dreamed many of those novel tales into reality. Afoot or on horseback in the hills behind my Dad's little ranch, I would become a tracker of wild beasts. Whether or not the animals were very wild (some were), I could become totally engrossed in the romantic and alluring pastime.

Some of us never lose that romanticism, I guess. We still thrill to the sight and expectations of fresh spoor. It must be a harkening back to the days when our ever-so-great grandfathers chased royal stags across the moors of the British Isles, or through dark European forests.

When Wyoming guide and outfitter Les Shoemaker called me recently to inquire if I wanted to see and photograph an elk herd, I jumped at the chance. I could ill afford to be out of the office, but then again for peace of mind I could ill afford not to go. I don't especially relish being constantly tied to an editor's desk, as satisfying and engrossing as that may be. There needs to be a recharging of the spiritual batteries if a clear mind is to grasp all the tasks at hand.

So it was that I looked forward to a pleasant interlude in Wyoming's great outdoors. After a drive to the Shoemaker's ranch at Dubois, I was met by Les and his wife, Alice. Errol "Pete" Peterson, a tall and typically rugged westerner, and son-in-law of the Shoemakers, had the horses caught up and saddled.

Once the horses were loaded into the truck, we headed for Horse Creek, north of Dubois. There we unloaded, checked cinches, put on bridles and prepared for the ride.

A friend of the Shoemakers told us there had been around 2,000 head of elk on the slopes just above us. He said we could expect to see them anytime after we broke over the first high ridge.

Now anyone who has been an elk hunter, either with gun or camera, knows the thrill of seeing just one elk. To be on the trail of about 2,000 wapiti was almost unbelievable.

These are truly wild elk. They spend their summers in the deep forested basins along the flanks of the Absaroka Mountains, or on the high plateaus. Research has indicated that some of them may gaze upon Yellowstone Lake in summer. But when winter clouds gather along the horizon, the elk start moving, down and out of the mountains. They stop only when they have reached the bare, windswept hills north of Dubois. This is their winter range.

The day was brisk and invigorating. We had bundled up for a cold ride but it wasn't as bad as we had expected.

Les and Alice are not only dude ranchers but also big game guides and outfitters. Both are as good as they come. I had gotten to know Les when he was a district forest ranger at Dubois and I worked at the state fish hatchery just below the ranch they now own. So Les and Alice are great companions for such a ride.

There were no elk over the first ridge, nor over the ridge after that. But it was still a thrill, and a matter of great wonderment to me, to follow upon the tracks of hundreds of elk. They had preceded us by only a few hours. We finally came close to a small bunch. The great herd was a dark mass in a valley far below us.

Once having seen them, we turned back. Lunch beneath a huge limber pine was one of those pleasant hours which live on in memory. It was only a day, but one of those days which is sort of a landmark. It was like one of those stories of old. Only this time it was for real.



Les and Alice Shoemaker ride up to a giant limber pine amidst Wyoming's hills. Tracks across the snow were made by herd of elk moving to winter range.

## Letters To The Editor



Editor:

Delighted with your great newspaper. Our congressman complains of lack of information. You have plenty of articles for clipping.

Mrs. Robert L. Black, Jr.  
Cincinnati, Ohio

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Editor:

I have read your newspaper with interest, not because I agree with you, but because I am interested in what you and the people you represent have to say. However, I have noticed that your articles are very much slanted with little or no coverage for the other side of the story.

Now I read lately in the Casper Star Tribune that you are very much in favor of all sides to a story. I am very happy to hear that you really are, after all, a man of eminent fairness. Therefore I am sending a copy of an article written by Ellery Sedgwick, Jr. entitled "Importance of Mining" which I am sure you will want to run in your paper. I have not read a better article that gives "the other side" of your story.

Thank you.  
Sincerely,  
Darrell Spilde  
Casper, Wyoming



## HIGH COUNTRY NEWS

Published bi-weekly at 140 North Seventh Street, Lander, Wyoming 82520. Tele. 1-307-332-4877. Copyright 1971 by HIGH COUNTRY NEWS, Inc.. 2nd class postage paid at Lander, Wyoming 82520.

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Subscription rate	\$10.00
Single copy rate	35¢

Box K, Lander, Wyoming 82520

Editor's note: Come now, Mr. Spilde, you really wouldn't expect an environmental newspaper to parrot the line of the polluters, the spoilers, the unethical miners, the timber beasts and like kind would you now? If you want to get their version of the way it is, you read their house organs.

We are unreservedly and unabashedly for a livable environment anywhere in the world, and we don't hesitate to say so even if it steps on a few toes. As to your reference to the recent criticism by me of Wyoming newspapers, I stand on that criticism. They are papers of general circulation, to serve the interests of the general public. Their responsibility should be to present as much information as possible on both sides of the issue wherever possible. I am not a trained journalist but I am well informed on enough issues to know when I am being had by the general circulation newspapers of Wyoming.

I am at somewhat of a loss as to your inference that "the other side" doesn't get a hearing in the pages of High Country News once in awhile. If you read your Dec. 24 issue of High Country News carefully, you surely saw a reprint of "Energy - A Look Ahead" by Humble Oil Co. And if you will remember, I prefaced the article by some remarks of my own in which I said, "Whether or not you agree with the points of view put forth by the company in this discussion, it contains much factual material and some serious food for thought."

On the editorial page you will see the article which you enclosed. It is there not particularly because you sent it but, again, because it contains material which should be of interest to our readers.

The article is generally well put. I have no quarrel with what Mr. Sedgwick has to say until he gets to the fourth and fifth paragraphs. What Mr. Sedgwick doesn't say is that industry, and especially mining, is under heavy attack because of the utter devastation and destruction of the earth's surface so often perpetrated by these industries. (See Environment and Politics also on editorial page.)

As to the regulation of industries, it has become readily apparent that you can't just leave it up to the locals. Much as many local people would like to see environmental problems solved or alleviated, it just doesn't happen until some higher authority, some-what detached from local politics, steps in.

The people at Laramie, Wyoming, tried for twelve long years to get Monolith Cement Co. to do something about the clouds of fine particulates which came from the plant. It wasn't until the State finally got air quality standards in

(Continued on page 14.)



## Guest Editorials



Reprinted from THE IDAHO STATESMAN, Boise, Dec. 1971.

### New Rate More Realistic

A new discount rate of 7 percent for federal public works projects could have great significance for Idaho. It could head off the construction of environmentally harmful dams which don't pay their way.

The new rate, approved by the Water Resources Council, will mean a more realistic evaluation of the economic "benefits" of dams. One supporter of the higher rate, Sen. William Proxmire, estimates that it could save \$1.5 billion of the \$2.7 billion a year now spent on public works.

Unless Congress changes it, it means a stiffer economic test for irrigation, power, flood control and navigation projects. It will take some of the hot air out of the calculations now used to determine what the projects are worth.

One obvious question raised by the rate is its effect on the proposed Southwest Idaho irrigation project. At 7 percent, Southwest Idaho might not pass the economic tests.

The Lower Teton project offers an example of what it can mean. Since it was authorized in 1964, Lower Teton relies on a 3.25 percent rate. At 7 percent it couldn't be built - even with all of the inflated "benefits" which have been cranked into the calculation of its value.

At 7 percent, federal projects would have to come closer to the economic test that would be applied to a private investment. The administration's Office of Management and Budget wanted to make it 10 percent.

So far as irrigation is concerned, the lower rate made sense in the past. It made possible water projects which helped "settle the West."

But now the West is settled. National crop production is on an upward curve. Last year 18 million acres of crop land was held out of production, including 400,000 in Idaho. This year

the Agriculture Department hopes to hold out 38 million acres.

When farm prices are depressed and crops are in surplus, it is no favor to the farmer to bring thousands of added acres under irrigation - particularly when he as a taxpayer helps pay for it.

Irrigation projects which provide supplemental water that is really needed are another matter. The Salmon Falls project is a good example.

Numerous rivers and canyons have been sacrificed to marginal "flood control" projects. The more enlightened approach is to discourage building in flood plains, where it hasn't occurred.

In the past almost any Congressman could be persuaded to support a dam project that involved spending a few million federal dollars in his territory.

The conservation movement, recognizing the value of undammed rivers and unflooded canyons, has helped change some attitudes. Farm surpluses and farm payments to keep land out of production are also being considered.

Aside from those considerations, we ought to recognize that there are better ways to spend \$1.5 billion or more a year than on marginal or boondoggle dam projects.

The nation faces a big challenge in paying for sewage treatment. The same taxpayer who has been helping pay for dubious water projects is also being asked to pay for needed sewage plants.

The higher discount rate is a welcome move. Even in the West we should recognize that if a project can't meet an economic test, there are better ways to spend the money. Perhaps Congress could even save some of it.

### Importance Of Mining

The following is reprinted from the MINING CONGRESS JOURNAL, Nov. 11, 1971, which was sent by one of our readers (see letters, page 2). It was written by Ellery Sedgwick, Jr., chairman of the board of Medusa Portland Cement Co. As the JOURNAL says, his message is "one that needs to be better understood by a larger segment of our citizenry . . ." We would generally agree.

The editor

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If it were not for our mining industries we would be living in the dark ages literally as well as figuratively. Unless men took minerals out of the ground and made them into useful products, we would have no civilization at all. There would be no heat, no light, no policemen on the street, no school teachers. This is a fact that is hard to believe, but, for example, look around your house - your stove, your icebox, your television - everything you can see comes out of the ground. Go out in the street and look around you - the automobiles, the buildings, the pavement - they all come out of the ground.

Now, the interesting thing is that less than 2 percent of all the people are employed in taking minerals from the earth, and less than 35 percent of all the working people are engaged in turning these materials into goods and services that are useful to all the people. All the other people, more than one-half in the country, are engaged in providing services. These include government workers, such as postmen, street cleaners, firemen and soldiers. They include lawyers, shop clerks, bankers and doctors. Most of the people you know are service people.

Where does all the money come from to pay all these people their wages and salaries? Some of it, about twenty-five percent, comes from the government; but where does the government get the money? I don't think one college senior out of 50 knows the real answer to this. Life has become so complex that few people realize where the money for their paycheck comes from. If it were not for the mining industry first, and the manufacturing industry second, there would be no money to pay anyone's salary. Take the example of the school teacher: he gets paid by the local school district which, in turn, collects the taxes from the residents of the community. The lawyer pays taxes, the dentist pays taxes, and the steelworker pays taxes. But who pays the lawyers and the dentist? The source of the pay they receive comes directly or indirectly from the earnings of the people who make the things that everyone wants - from people who work in the mines and factories. There is no other source of money than the wealth provided from the earth.

To better understand this, consider what would happen if, for example, 10 percent of all the mines in the country were shut down by government order. The supply of power would be cut back, lights and televisions would dim, factories would have to reduce schedules, unemployment would rise - there would be less money to pay taxes, government services would be cut back, school teachers, firemen and garbage collectors would either lose their jobs or take a pay cut. All these things might well happen if the recommendations of certain activists' groups in this country were followed.

Industry, and especially mining, is under heavy attack from such groups as conservationists, "consumer advocates" and other zealous guardians of the environment. These well-intentioned but highly critical groups have never contributed to the creation of wealth, they have never taken minerals out of the ground or turned them into useful products, but still they have all the answers to what is wrong with our country.

It must be made very clear that poor product quality or poor safety standards cannot be tolerated. Furthermore, industry and mines must take every reasonable step - even though costly - to obtain the maximum elimination of air and water pollution. We must conserve the natural beauty of the land. But the regulation of these matters should not be in the hands of dogooders and sidewalk superintendents who rush in on a wave of emotion and attempt to arbitrarily shut down mines and factories. There should, instead, be federal guidelines that are carefully developed by knowledgeable experts with the more specific standards established and policed by the individual states responsive to local conditions.

In conclusion, I say that all those who are employed in the mining industries rather than being subject to criticism can take pride for their very essential and fundamental contribution to the well being of all people. They stand on the very foundation stone of our entire economic and social structure.

Reprinted from THE CASPER STAR-TRIBUNE, Wyoming, Jan. 1, 1972.

## Environment and Politics

by Rowland Evans and Robert Novak

WASHINGTON—William D. Ruckelshaus, the dynamic enforcer of environmental laws for the Nixon administration, is poised to oppose the will of influential White House political aides and perhaps President Nixon's own inclinations in the nation's hottest battle over industrial pollution.

The case involves Reserve Mining Co. of Silver Bay, Minn., dumping some 67,000 tons of iron mining wastes into Lake Superior over two decades. Early in January, Ruckelshaus is expected to order Reserve Mining to convert its operations to dump wastes in ways that won't pollute the lake. That would require getting rid of most of it on land, thereby setting off a protracted court struggle.

This will climax weeks of struggle within the Administration over the wisdom of cracking down on industrial polluters who happen to be generous Republican campaign contributors. Indeed, the Reserved Mining case typifies the Nixon administration's split personality on environmental questions.

Clearly, President Nixon did not calculate the cost to Republican businessmen when he declared war against pollution in his 1970 State of the Union address. Since then, his ardor as an environmentalist has cooled. In private and public (most recently in Detroit on Sept. 23), Mr. Nixon disclaims any intention of making industry a "whipping boy" or "scapegoat."

But the President's views are moderate compared with Secretary of Commerce Maurice Stans, who sees an environmental conspiracy against private industry. He is supported by the two White House aides with intimate ties to big business: Peter Flanigan and the omnipresent Charles W. Colson. To these friends of industry, Ruckelshaus and his Environmental Protection Agency (EPA) have capitulated to the conservation freaks.

The Commerce-White House group has been particularly upset with what it considers EPA harassment of Reserve Mining, whose two shareholders—Republic Steel Corp. and Armco Steel Corp.—are part of the Republican party's fund-raising apparatus in Ohio. Willis Boyer, chairman of Republic Steel, is a vice chairman of the Ohio Republican finance committee. C. William Verity, head of Armco Steel, is an active party fundraiser. Boyer and Verity are

members of the National Industrial Pollution Advisory Council set up by Stans.

Nor do these Republican businessmen hesitate to use their connections. When EPA ordered Armco to stop dumping wastes in the Houston, Tex., ship channel, Verity contacted Flanigan at the White House. The result: negotiations giving Armco a six-month delay.

The industrialists were exerting similar pressure in the Reserve Mining case including a White House meeting between company officials and Flanigan. But Ruckelshaus put his foot down this time. He explicitly informed the White House staff and Stans he absolutely would brook no interference from them. Up to now, his strong stance has not been overruled by the President.

So tough a posture could not be dared by a mere bureaucrat. Ruckelshaus is a formidable figure back home in Indiana with a bright future in electoral politics. More important, as an Assistant Attorney General before moving to EPA, Ruckelshaus developed a warm relationship with a political adviser who dwarfs even Colson in influence: Atty. Gen. John Mitchell.

Consequently, although Ruckelshaus has no easier access to the President's mind and heart than other top Administration officials, he does have an indirect route through Mitchell. Using the Attorney General as an unlikely conduit, Ruckelshaus argues the environmental issue to Mr. Nixon.

Moreover, he is buttressed on the Reserve Mining case by popular support in the three states bordering Lake Superior. The governors of Wisconsin, Minnesota and Michigan all are demanding on-land disposal. So is the politically astute Senate Republican whip, Sen. Robert Griffin of Michigan.

In fact, Reserve Mining's arrogance in refusing to voluntarily curb pollution has enraged citizens in the area. Quite apart from the issues, backing down would be bad politics for Mr. Nixon in the Upper Midwest.

That is not the viewpoint at the White House and Commerce Department, however. Conversion to on-land disposal would cost Reserved Mining between \$48 million and \$75 million in capital expenditures and \$10 million to \$14 million in extra annual operating costs. Is this the proper reward, ask Mr. Nixon's political advisers, for generosity to the President's election campaign fund? That is the thinking Ruckelshaus is bucking in trying to clean up the environment.



# Population Growth...

HIGH COUNTRY NEWS believes that a National Population Policy is a prerequisite step toward solution of growing environmental problems. Along with a National Land and Water Use Policy and a National Energy Policy, such a population policy could give us national direction. These policies could help to bring order out of a worsening, chaotic situation which involves not only a deteriorating environment but also threats to our social and economic systems.

In line with our thinking, we here present an abridged text of the first interim report by the Commission on Population Growth and the American Future. The report was submitted to the President and the Congress on March 16, 1971. Under the chairmanship of John D. Rockefeller 3rd, the Commission was established by Congress just one year before to conduct studies about population growth and distribution in the United States and make recommendations about population policy. A final report is due March 16, 1972.

This abridged text will be presented in two parts. It is reprinted from Family Planning Perspectives.

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## Population in Perspective

The time has come to ask what level of population growth is good for the United States. There was a period when rapid growth made better sense as we sought to settle a continent and build a modern industrial Nation. And there was a period, in the 1930's when a low birth rate was cause for concern. But these are new times and we have to question old assumptions and make new choices based on what population growth means for the Nation today.

Our population reached 100 million in 1915; it now numbers over 200 million; the Nation had better get ready for 300 million; it may soon have to decide whether it wants 400 million. Should we look forward to celebrating the arrival of the third and fourth hundred million as we did the second hundred million? Whether or when we reach these totals will depend on what American couples do in the decades just ahead.

Such large differences in population size result from small differences in family size. For example, if families in the United States have only two children on the average and immigration continues at current levels, our population would still grow to 266 million by the end of the century; if they have three children the population would reach 321 million by then.

The difference is important not simply because of the numbers but because it bears vitally upon a fundamental question about the Nation's future: Do we wish to continue to invest even more of our resources and those of much of the rest of the world in meeting demands for more services, more classrooms, more hospitals, and more housing as population continues to grow? Or should we concentrate our energies and resources on improving the quality of existing services and extending them to large numbers of our people for whom the "quality of life" still means just getting a square meal?

## A Difference of One

Small differences in family size will make big differences in the demands placed on our society. That difference of only one child per family over just the next thirty years will have important consequences for the educational system.

If families average three children, in the year 2000 elementary school enrollment will be 50 percent above what it would be if families average only two children. Similarly, secondary school enrollment will be 43 percent higher and college enrollment 34 percent higher. In dollar terms, the three-child family implies that total annual costs of education will be nearly \$40 billion more (in 1969 dollars) in the year 2000 than for a population resulting from a two-child family. This would mean a 30 percent higher level of educational expenditures per working member of society.

In the health field, the three-child family implies an annual cost of \$14 billion more in the year 2000 than the two-child family just to maintain present standards. If health costs continue to rise as they have in the past, the difference would exceed \$30 billion. If the three-child family is the norm in the year 2000, the economy will have to provide the two-child family with the same standard of living. This could mean a higher level of resource use and environmental pollution.

The importance of these differences in costs is not that the Nation would be unable to meet the demands of a larger population, but simply that a lower rate of population growth provides more options for the use of our resources.

## Addressing the Issue

We have all heard about a population problem in the developing nations of Asia, Africa and Latin America, where death rates have dropped rapidly and populations have exploded. Only recently have we recognized that the United States may have population problems of its own.

There are differing views. Some say that it is a problem of crisis proportions - that the growth of population is responsible for pollution of our air and water, depletion of our natural resources, and a broad array of social ills. Others point to recent declines in the birth rate and assert that the problem is disappearing. Still others claim that our problems are caused by the way our population is concentrated in metropolitan areas, by the amounts an affluent people consume and discard, by new products and technologies, or by inequities in access to the better things of life.

Our view, at this stage of our inquiry is that population growth of the magnitude we have had since World War II has aggravated many of the Nation's problems and made their solution more difficult. The point was stated by President Nixon in his Population Message of July 18, 1969, when he said: "I believe that many of our present social problems may be related to the fact that we have had only fifty years in which to accommodate the second hundred million Americans." And, the longer we delay addressing the issue, the more costly and arduous the task becomes because the population - and the number of potential future parents - will have

grown that much more in the intervening years. The cumulative nature of population growth requires us to take the long view. The children born in this decade will be parents of most of the children born in the year 2000. What we do now will have real impact then. It is a challenge that Americans have rarely been called upon to face.

We are not saying that population growth continued at current rates portends an immediate crisis for the country. There is little question that the United States has the resources, if it chooses to use them, to meet the demands of a population growing at the current rate as well as to correct various social and economic inequities, as the President's National Goals Research Staff recently indicated. And it is equally true that our social and economic problems would not be solved by the stabilization of population alone. We are simply saying that population growth is important. It makes a difference.

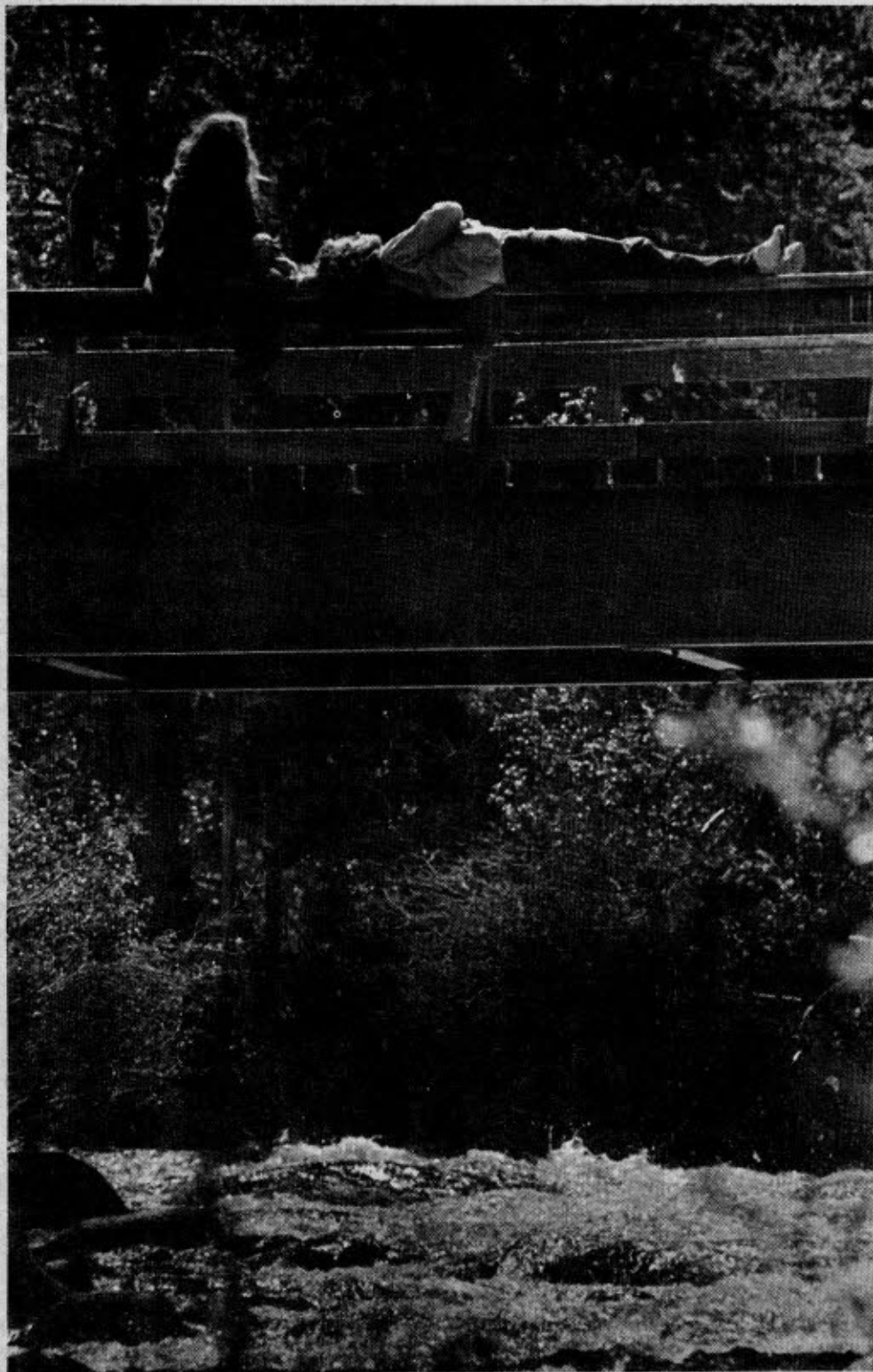
## Prospects for Population Change

Every day in the United States an average of almost 10,000 babies are born, about 5,000 persons die, and over 1,000 more persons enter the country than leave. This adds up to a net increase in total population of about 6,000 a day, or over two million persons a year.

These population numbers reflect life and death and new opportunity for the individual. For society, the balance of births and deaths and migration is profoundly important; the effects are long range and the consequences of great significance.

Recent Census Bureau figures indicate that if families average three children over the next few decades and immigration continues at present levels, our population will reach 3000

(Continued on page 5)



Who is to determine the quality of life for possibly 300 million Americans by the year 2000? Studies now underway indicate that the question is going to become of increasing concern. But it is certain that those who live and reproduce now have great influence on what will happen 30 years from now.



# ... And America's Future

million in 1996, only a quarter-century from now. If we average two children, that day will be postponed another 25 years to the year 2021. We are currently reproducing at a rate roughly midway between two and three children, which would bring us to 300 million around the year 2008.

The Census Bureau figures are not intended to be forecasts. The birth rate changed so rapidly in the past few years that last year the Census Bureau had to revise downward the projections it had issued only three years before. So it would be possible for the Nation to reach 300 million after these dates, or conceivably before. But it appears highly likely that we will reach that figure.

It may seem odd, when we have only recently passed the 200 million mark, to be saying that we are fairly well assured of reaching 300 million. Population growth tends to develop its own momentum which makes it difficult to stop, no matter how hard the brakes are applied. Even if immigration from abroad ceased and families had only two children on the average - just enough to replace themselves - our population would continue to grow until the year 2037, when it would be a third larger than it is now.

This momentum is the legacy of past population growth. Thirty years ago, in 1940, we had a population of 132 million people. After all the births, deaths and new immigrants over the following 30 years were balanced out, by 1970 we had a population of 204 million and a net gain of 72 million. Because of the baby boom, the number of persons now moving into the child-bearing ages is much larger than previous generations of parents. In 1975 there will be 5-1/2 million more people in the prime childbearing ages of 20 to 29 than there were last year. By 1985 the figure will have jumped still another 5-1/2 million.

## A Fourth Hundred Million?

If it seems odd to be thinking now about our third hundred million, it may seem absurd to raise the question of a fourth hundred million. However, whether we add that fourth hundred million may be determined by what Americans do about family size and population in the next couple of decades.

The children born in this decade will be parents in the year 2000, and they will contribute most of the births occurring in that year. So the number of births thirty years hence depends heavily on the number of children born in the 1970's and the reproductive patterns they follow when they come of age.

An average of three children per family in the future, as unlikely as that appears at the moment, would give us a population of 400 million in the year 2014, less than a half-century away. With an average of two children, we could forget about the fourth hundred million if immigration were not a factor.

When we speak of two or three-child families we are talking about averages which can be made up by many possible combinations of families of different sizes; ranging from childless couples to those with many children.

A vocal group of concerned citizens is calling for population growth to stop immediately. While there are a variety of paths to ultimate zero growth, none of the feasible paths would achieve it immediately. Our past rapid growth has given us so many young couples that they would have to limit their child-bearing to an average of only about one child to produce the number of births consistent with immediate zero growth. Ten years from now, the population under 10 years old would be only 43 percent of what it now is, with disruptive effects on the school system and ultimately on the number of persons entering the labor force. Thereafter a constant total population could be maintained only if this small generation in turn had two children and their grandchildren had nearly three children on the average. And then the process would again have to reverse, so that the overall effect for many years would be that of an accordion-like mechanism requiring continuous expansion and contraction.

We doubt that such consequences are intended by the advocates of immediate zero population growth.

## Two-thirds of Our People

The growth of population in the United States has been interwoven with the movement of our people across the face of the land.

In 1790, the four million people of the United States occupied a narrow coastal area along the Atlantic. Today, one-third of our people live west

of the Mississippi, and our most populous State is on the Pacific coast.

When the United States was formed, 95 percent of our people were rural, living on farms and in towns and villages. Today, over two-thirds of our people live in metropolitan areas and many more live in cities and towns outside metropolitan areas.

In the 1960's more than three-fourths of our Nation's growth occurred in metropolitan areas, with the suburbs absorbing most of it. Suburbanites now outnumber those living in central cities. The farm population dropped from 15 to 10 million, and about one-half of the Nation's three thousand counties lost population. Another one-fourth of the counties had slow growth rates because more people moved out than moved in. Migration patterns continued from mid-country out to coastal areas.

In contemporary discussion of population growth and its effects, we hear the view that the population problems of our society are caused more by the concentration of population in large urban areas than by the size and growth of the total population; that, therefore, we should be worried less about the number of people in the United States than about the way they are distributed geographically; and that government efforts should be devoted to achieving greater geographical dispersion of growth.

The issue is not that simple. Many of our largest cities have actually lost population. It is their suburbs and metropolitan areas of intermediate size that have grown rapidly in the past decade. Furthermore, we already are a metropolitan people. Two of every three Americans now live in metropolitan areas and this trend is continuing. This means that the size of the total population and the size of the metropolitan population are becoming increasingly synonymous and that metropolitan population growth will increasingly reflect changes in national birth rates. Over the past decade alone, 70 percent of the growth of

metropolitan population occurred as a result of natural increase. If there had been no net migration at all to metropolitan areas, these areas would have experienced most of their growth anyway.

The point is that national population growth and geographical distribution cannot be treated as an either-or affair. The distribution of population is problematic in many ways. But the choice among ways to redirect growth does not eliminate the necessity of making a choice about when the Nation could best accommodate 300 million people or whether it should accommodate 400 million.

## To Know Where We Are Going

Since knowing where we are and have been helps us to know where we are going, the Commission is using the results of the 1970 Census and earlier censuses to gain an understanding of the growth, transformation and redistribution of the population of the United States in this century.

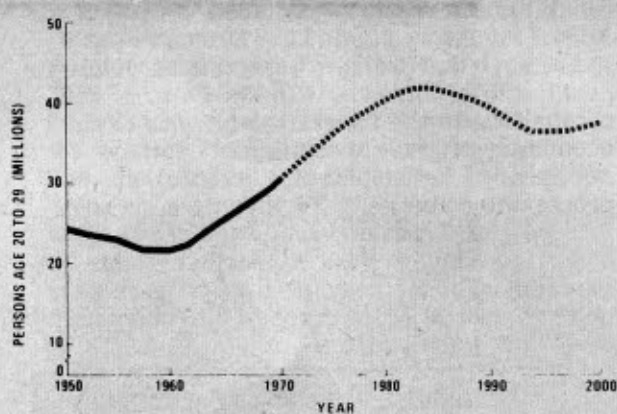
The Commission's research on prospects for population growth includes projections of population and population characteristics and studies of the importance of unwanted child-bearing, the demographic impact of immigration, abortion, voluntary sterilization and family planning programs, the future of contraceptive technology, and the level of popular education about population.

With regard to the distribution of population, the Commission is preparing projections of regional and metropolitan growth, examining the implications of economic changes for redistribution of population, studying the ways in which distribution patterns compound national problems, and investigating the factors which influence individual decisions to move.

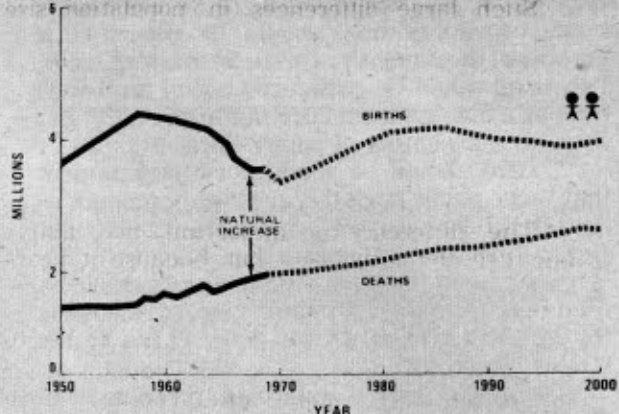
## Continued Next Issue

Why 2-Child Family Won't Stop Population Growth by Year 2,000

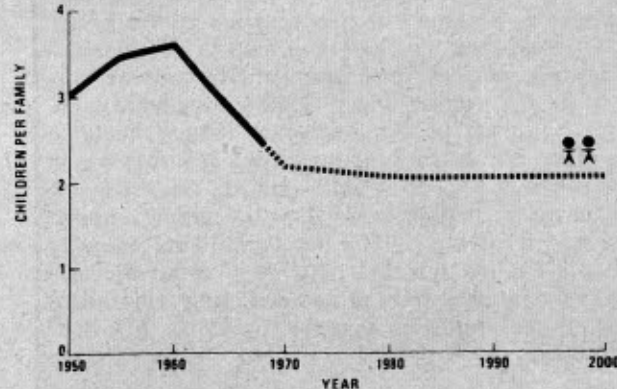
An average of 2 children per family would slow population growth, but would not stop it soon because the number of people of childbearing age is increasing...



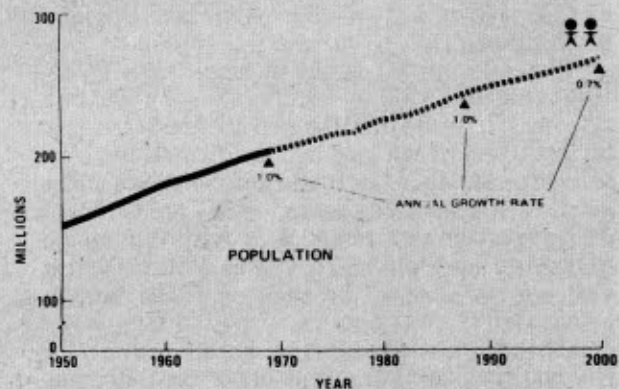
The resulting births will continue to exceed deaths for the rest of this century...



... So even if family size drops to a 2-child average...



... So the population will still be growing in the year 2,000, but at a decreasing rate.



## Park Wilderness To Be Discussed

The National Park Service today invited public participation in a series of March meetings and hearings to discuss master plan reports and suggested wilderness area boundaries at two of the best known and heavily visited units in the Park System--Grand Teton and Yellowstone National Parks.

The proposals call for designation of 110,700 acres of the 310,443-acre Grand Teton National Park as wilderness. At Yellowstone, 1,963,000 acres of the park's 2,221,773 acres are proposed for wilderness designation.

Grand Teton, encompassing a matchless combination of the flat valley called Jackson Hole and a magnificent array of lofty peaks mirrored in clear lakes, was established and dedicated in 1929 to preserve a 30-mile section of the abrupt, scenic Teton Range.

Yellowstone is known throughout the world as

the first national park. Observing its centennial this year, the park's establishment in 1872 marked the initial manifestation of the National Park idea. This concept has now spread to most nations of the world.

J. Leonard Volz, director of the Service's Midwest Region in Omaha, Nebraska, said that on March 10, at 8:30 a.m., the master plan for Grand Teton will be presented for discussion at the Pink Garter Theater in Jackson, Wyoming. At 2:00 p.m., also at the Pink Garter, the wilderness hearing for the area will be held.

The master plan for Yellowstone will be considered at 8:30 a.m. meetings March 11 at the Pink Garter in Jackson, March 13 at the Stardust Motel in Idaho Falls, Idaho, and March 15 at the Elks Club in Livingston, Montana.

Following the master plan meetings, (Please turn to page 14.)



# The Nation's Public Lands . . .

Part Two:

## Management

How should retained lands be managed? Currently, national park and wilderness areas, established with much effort through the years, are restricted by and large to recreational uses. But the PLLRC says that they are "potentially capable of providing a variety of goods and services" and the agencies "should be given clear direction to manage primary use lands for such secondary uses as are compatible." This would result in the "efficient use of our limited land base." Some critics fear such a policy would open some park and wilderness areas to grazing, timbering, mining and other uses.

As for national recreation areas, wildlife refuges and ranges, current practice is to designate a primary use but to permit other uses considered compatible with the primary one. On other public lands, including national forests and the BLM's public domain, primary use is not designated, but Congress has given general flexible authority to allow "multiple use."

The Forest Service, for example, has long employed multiple-use principles, and in fact uses a "rudimentary zoning system" for this purpose. The PLLRC now casts a heavy shadow over multiple use, on grounds it is not "precise" and "has little practical meaning as a planning concept." The commission notes further that "Congress has not defined the primary purpose of use" of national forest and other lands, and that a "variety of values flow" from them.

"Thus," says Stoddard, "in one stroke the national forest system which has been a model in applied conservation for 65 years is thrown back into the same uncertainty as the unreserved public domain."

What the commission does emphasize is that "management of public lands should recognize the highest and best use of particular areas of land as dominant over other authorized uses." (Emphasis added.) The PLLRC feels that a "dominant use zoning system" would not do away with multiple-use management, but would "provide the positive statutory direction and strengthening" it needs. The commission says that "only those areas that have an identifiable highest primary use" should be placed in a dominant use category. On the remaining lands, "all uses would be considered equal until such time as a dominant use becomes apparent." But there are a number of punch lines:

"There should be a statutory requirement that those public lands that are highly productive for timber be classified for commercial timber production as the dominant use . . ."

"Dominant timber production units should be managed primarily on the basis of economic factors so as to maximize net returns to the federal treasury."

"Mineral exploration and development should have a preference over some or all other uses on much of our public lands." ("Mineral deposits of economic value are relatively rare and, therefore, there is little opportunity to choose between available sites for mineral production.")

The concept of dominant use, says Pyles, "suggests inflexibility." Kelso says it could be a "device for protecting the private business-firm tenant users of the land against intrusion" by a manager acting in the public interest. Schneider says "it is difficult to perceive how a 'dominant use' approach can result in providing for both monetary and intangible values without doing violence to one or the other." The recommendations fly against "well-established economic principles," says Kelso. And the Forest Service staff memo says that "formal 'dominant use' zoning would appear to give a preference to all increments of the designated dominant use even where there is opportunity for valuable increments of other, perhaps conflicting uses . . . Would areas designated for a dominant use likely gravitate toward a single use?" Says Stoltenberg: "With continuously increasing demands for all uses, I am confident that the maximum-net-public-benefit solution lies in finding more efficient means of harmonizing the simultaneous production of various benefits on more areas, rather than in further segregation of uses."

Stoddard summarizes the various commercial timber recommendations in this way: "Conservationists who recently and successfully opposed the so-called National Timber Production Bill in Congress will have no trouble recognizing outright endorsement of the principal items in the commission's proposals for dominant timber production zones, increased allowable cut based upon economic efficiency (hence not silvicultural) factors, simplified

timber sale procedures, accelerated 'access' road construction, and a special 'revolving fund' for timber management tied to timber sales. 'High yield' forestry is suggested through rapid liquidation of old growth by the old slide rule gimmick of reducing rotation age. Regimented landscapes of the monoculture resulting from clear-cutting and planting can be the only result."

## Mining Problems

Public lands have long been plagued by the Mining Law of 1872, which gives "hard rock" mineral prospectors almost the run of most of them. They can mine without paying anything to the government or even notifying it of their entry and operations. Title to the land and its resources can be obtained for \$5 or less per acre. The land managers have no authority to reject or regulate mining operations, require competitive bidding, or impose any environmental conditions. Few public lands are exempt from these lax provisions.

The 1872 law has permitted immeasurable abuse and fraud and has left many areas pock-marked and degraded. Conservationists have long urged that it be replaced by a more controlled system of leasing, with rent and royalty payments such as those drawn from gas, oil, and other extractive operations. "After eight years in this office," said outgoing Interior Secretary Stewart Udall on January 15, 1969, "I have come to the conclusion that the most important piece of unfinished business on the nation's natural resource agenda is the complete replacement of the Mining Law of 1872."

The PLLRC would make some revisions in the law. Under them, a prospector would have to give notice to obtain exploration rights; he would be charged "reasonable rentals," (but expenditures for exploration and development could be credited against these); he would also pay royalties on the value of minerals produced, not on ore in the ground; and the administrative agency could set some conditions on what surface environmental measures, and what type of rehabilitation, would be required.

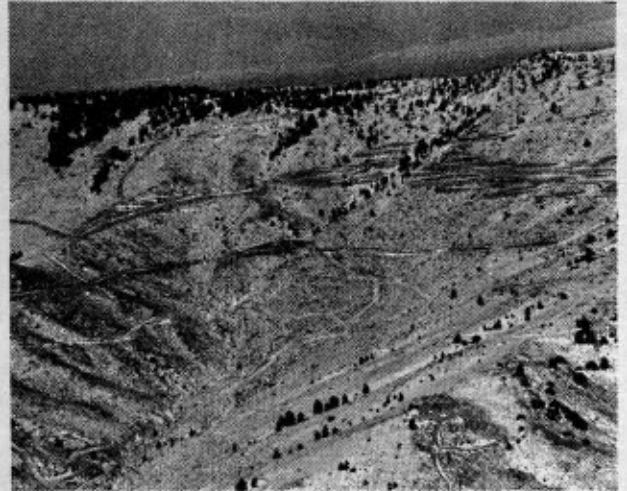
But miners would still have full entry rights. Kelso says that the hard-rock mining industry could, "in accordance with its express wish, obtain title to the mineral body, plus assured occupancy rights to sufficient surface for necessary development, extraction and processing activities." Furthermore, he notes, the patentee would have the privilege of acquiring title or lease to surface rights by payment of full market value, and could keep the public's interest in unworked bodies of ore from reverting to the public.

### BRING ON THE PUBLIC -- SOMETIMES

"To apply the economic efficiency concept to publicly owned resources is to substitute marketplace decision-making for the democratic political process," says resource expert Charles H. Stoddard. "Acting through its elected representatives, the citizens of this country have made it quite clear that long-term, environmental, public, intangible values should be paramount in the handling of our federal natural resources. The Public Land Law Review Commission flies in the face of public opinion tested by history." On the other hand, there is some feeling that bringing such economic emphasis into the light of day will help crystallize opinions and give sharper focus to decision-making.

The PLLRC does emphasize the need for public participation in decisions. Noting that citizens are frequently excluded from management agency planning, it says public hearings on proposed federal land use plans are "essential." It also calls for consultation with citizen advisory boards and state and local governments. However, only on the request of a state would the PLLRC require hearings on proposed "withdrawals" of land for particular purposes. And while the commission recommends mandatory public hearings "in situations where significant environmental considerations are involved," these would be required only when requested by a state or the Council on Environmental Quality. The PLLRC further expressed concern over "extensive litigation, such as we have witnessed in the past year." It said that, in order to "minimize the dilatory effects of court involvement," judicial review should generally be limited to those who participated in the administrative proceeding.

Moreover, as Stoddard commented, the commission "proposes leasing federal oil shale lands for 'experimental' development, a foot-in-the-door beginning of a major giveaway, despite the fact that the oil companies have adequate shale lands of their own for this purpose."



The 1872 Mining Law has allowed degradation of the landscape on an unknown scale. The PLLRC report does not come to grips with the antiquated basic philosophies of the law. Outgoing Secretary of the Interior Stewart Udall spoke for most conservationists when he said, "I have come to the conclusion that the most important piece of unfinished business on the nation's natural resource agenda is the complete replacement of the Mining Law of 1872."



## General Criticisms

Phillip Berry, president of the Sierra Club, wrote in its October 1970 Bulletin that the basic premises of the commission are wrong. "The report assumes that the twin evils of (1) population growth and (2) the notion of a limitless, ever-expanding economy are here to stay. It assumes that the attendant demands for more and more economic affluence, involving massive consumptive uses of finite natural resources, can and will always be met . . . It fails to acknowledge that if we plan for population growth, that's exactly what we will get, together with massive deterioration of the environment which the press of many additional people inevitably brings."

Caldwell notes that a population increase of 100 million by the year 2000 "is accepted without question," but "the idea that public land holdings should be substantially increased (especially in the areas peripheral to large cities) may possibly have been an 'unthinkable thought' for the commission." Yet, says Caldwell, "a very good case could be made for increasing public lands in the United States by at least one-third."

The PLLRC likewise seems to have little concern for any long-term need to husband exhaustible resources. "Our standard of living and our national defense are heavily dependent upon the availability of fuel and nonfuel minerals," the report says. The suggestion that the protected status of Naval Petroleum Reserve No. 4 in Alaska be reviewed is illustrative. Stoddard says "one questions whether the flag-waving oil industry is proposing to jeopardize our future national defense petroleum sources."

Roger P. Hansen, executive director of the Rocky Mountain Center on Environment, says he can understand why the discovery of new domestic mining inventories is urged, but "it seems inconsistent for the commission to continue to promote development and a continued acceleration of consumption." He says the report does n't once "come to grips with the problems of consumption as regards mineral supplies, dwindling not only in the United States

(Continued on page 7)



# ... A Vast Potential

but around the world. Not once is there any distinction made between discovery -- the creation of an inventory -- and immediate development."

Heyman speaks of the report's "failure to display a systematic analysis" of possible future changes in goals, consumption habits and technology. He said there is no consideration of timber substitutes, techniques for higher yields or non-grazing methods of meat production. And Kelso wonders why there is "no mention of the public corporation as a possible device" for public lands management.

## Environmental Values and Protection

The commission comes out strongly for meeting expanding needs "without degradation of the environment and, where possible, with enhancement of the environment." It proposes that "the enhancement and maintenance of the environment, with rehabilitation where necessary, be defined as objectives for all classes of public lands."

### FOREST PRACTICES ATTACKED

Even if wise public lands legislation is eventually put on the books, it will not necessarily be effective. For example, the management practices of the U.S. Forest Service -- which operates under the Multiple Use-Sustained Yield Act of 1960 -- have come under increasing attack. Critics claim that logging is emphasized at the expense of other legally recognized uses of the national forests. Logging methods such as "clearcutting" have also been scored. (Clearcutting involves levelling all the trees in an area, rather than taking only mature trees. It has raised storms of protest in such places as the Monongahela National Forest in West Virginia and the Bitterroot National Forest in Montana.)

Considerable criticism is contained, for example, in the recent "Bolle Report," named after its principal author, Arnold W. Bolle, dean of the Montana University School of Forestry. Also, the Sierra Club and others have a suit pending in which they challenge a huge Forest Service sale of timber from the Tongass National Forest in Alaska. Among the grounds: sale at less than fair market value, failure to give proper weight to recreation, wildlife and wilderness values, and violation of the multiple-use plan for the area.

In the PLLRC's view, the National Environmental Policy Act "does not provide goals that are sufficiently specific as guides for action on public lands." It says "Congress should specify the kinds of environmental factors to be considered in land-use planning and decision-making, and require the agencies to indicate clearly how they were taken into account."

The commission speaks in general terms of developing a "standard system of environmental quality classification" of public lands, and of federal standards "for environmental quality." But, as Caldwell says, the report doesn't make clear how environmental values would be "identified, weighed, and protected in the actual process of political decision-making." And the report concedes that "it will be quite difficult to establish standards for some aspects of environmental quality, such as scenic beauty, which is valued in subjective terms and is not susceptible to measurement."

In any case, the general recommendations do not quite jibe with the more concrete and specific recommendations that are nestled deep in the report. Speaking of mining, for instance, the report says "our emphasis must be on minimizing impacts," and that "those who use the public lands and resources should, in each instance, be required by statute to conduct their activities in a manner that avoids or minimizes adverse environmental impacts, and should be responsible for restoring areas to an acceptable standard where their use has an adverse impact on the environment."

The PLLRC goes on to say that, "in some instances, where the production of a commodity or the furnishing of a service is desirable to meet a national need, it may not be possible for private enterprise to undertake the activity if the full cost of avoiding adverse impact or of subsequent rehabilitation is charged to the user. We, therefore, recommend that on a pilot basis, federal departments and agencies be authorized to share in those costs after a formal finding that there is an urgent requirement for the proposed use, and that the level of rehabilitation should be higher than could reasonably be expected from private enterprise alone as in the case of oil shale development."

The PLLRC backs away from one kind of

environmental question with this statement: "Where mineral activities cause a disturbance of public land, Congress should require that the land be restored or rehabilitated after a determination of feasibility based on a careful balancing of the economic costs, the extent of the environmental impacts, and the availability of adequate technology for the type of restoration, rehabilitation, or reclamation



proposed. Rehabilitation does not necessarily mean restoration, but rather the maximum feasible effort to bring the land into harmony with the surrounding area." (Emphasis added.)

On the environmental aspects of the report, Stoddard writes: "It is an open secret that PLLRC-contracted studies on environmental impacts... were an afterthought brought about by the surge of public concern over air, water and land pollution... It would have been more meaningful if the commission's report had clearly set forth the principal environmental cruxes to which the public lands are subjected and then related them to maximum public benefit: open pit strip mining and tailings disposal, oil exploration damage and accompanying soil erosion, clearcut logging and accompanying skidding in streambottoms and hillsides, roads located and constructed purely for resource extraction, overgrazing and erosion of watersheds, unsightly power and pipelines over hills rather than around them, etc. Nonetheless, most of the 12 recommendations for conservation of environmental quality are useful and, if applied, would do much to stall off the

inherent dangers present in the rest of the report."

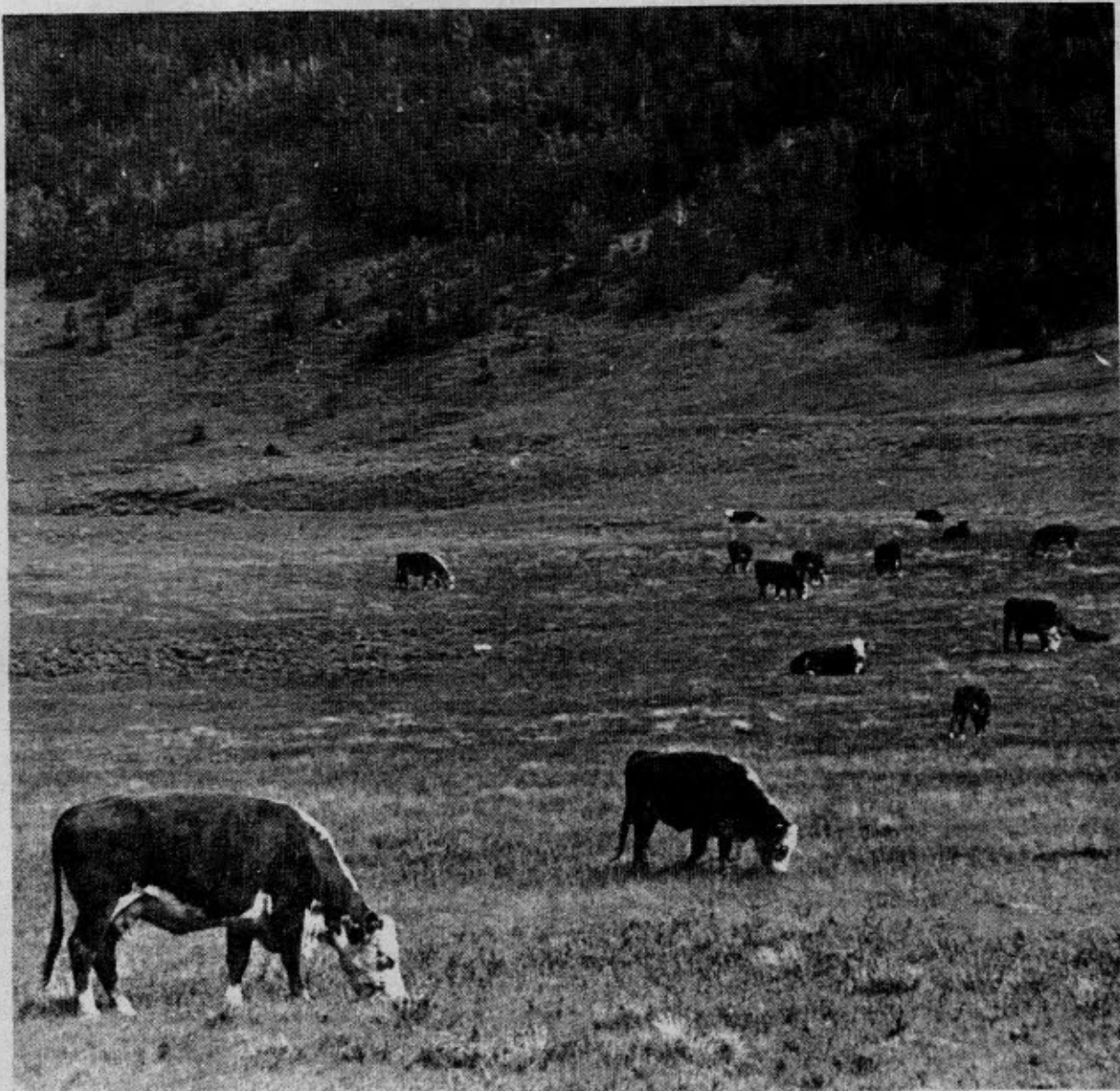
Schneider says that, "while environmental quality is abundantly stressed in numerous sections of the report, there is too little emphasis on the fundamental trinity of soil, water and vegetation as the basic national resource to be husbanded and given priority over all other values."

He said this omission was a "serious deficiency" in the conceptual approach, which was one of "solidifying contemporary use patterns." He said the "soil, vegetative mantle, water source and physiographic features... were not recognized as the determinants within which public land policy would evolve from this point on. On the contrary, a socio-economic concept tends to obscure the irrevocable and fixed ecological principles from which all the other values spring."

### MORE POWER TO... THE CONGRESS

Among key phrases not clearly defined in the Public Land Law Review Commission report are "net public benefits" and "highest use." Thus the true direction of public land management is likely to hinge on the definitions of these and other concepts which are made by Congress and the administrative agencies. The report is laced with recommendations that Congress assume more authority and specify how things are to be done, leaving the agencies less room to maneuver than they have had. For example, the commission says Congress should clarify by law "those factors that should be considered in all federal land use planning" -- including what is meant by "greatest net public benefit." It urges that Congress "prescribe the guidelines under which prospecting permits and leases may be refused on public lands open to mineral exploration." While some observers feel that a congressional focus will highlight issues for the public, others are concerned that Congress would be overly permissive, and that administrators, dealing with uniquely different pieces of land and environmental circumstances in the field, will not have the flexibility to make wise management decisions. Says Hamilton K. Pyles, of the Natural Resources Council of America: "The dangers of hamstringing administrative actions or bogging down the Congress with excessive detail must be avoided."

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The Public Land Law Review Commission report advances the concept of "dominant use." Most conservationists are concerned that such a concept would give uncontested control of the public lands to the economic users. Thus, grazing management would supercede wildlife management to the detriment of many big game herds which are maintained only by reason of the public lands.



# THE HOMESTEAD ARTIST

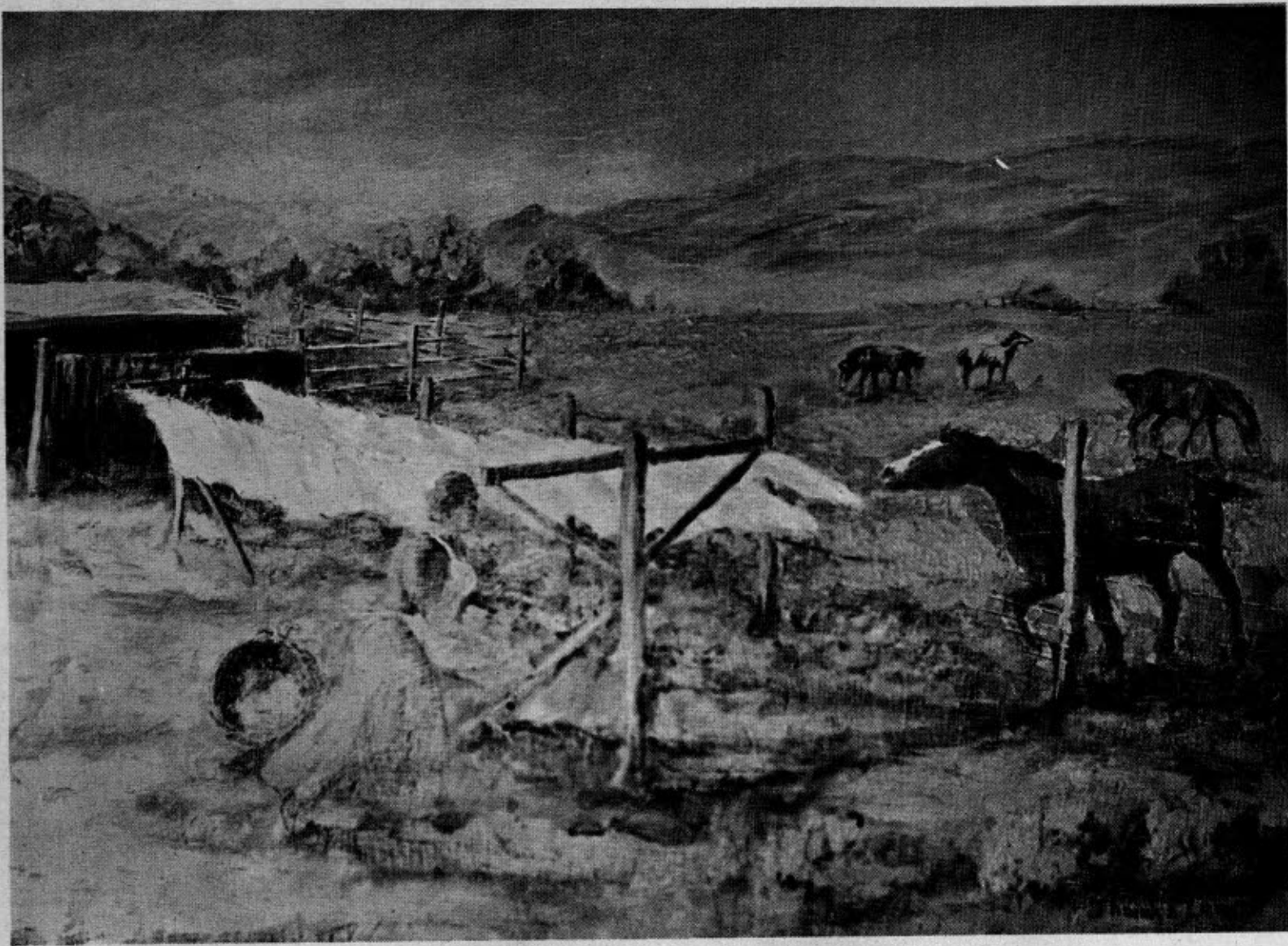
Tom Connell is one of that homespun variety of western artist who has lived many of the scenes he depicts. He could be called the "Homestead Artist" for he portrays scenes out of the Old West associated with the final settlement of a once-untamed land.

He is not a cowboy artist in the sense of a Charlie Russell, or others, although cowboys do appear in his works. But cowboys often did more prosaic things than fight Indians or ride off across the hills. They cut and stacked hay for winter feed for their cows — and then fed it,

sometimes in bits. There were fence chores to do. Cows did the simple living. Much of it wasn't that.

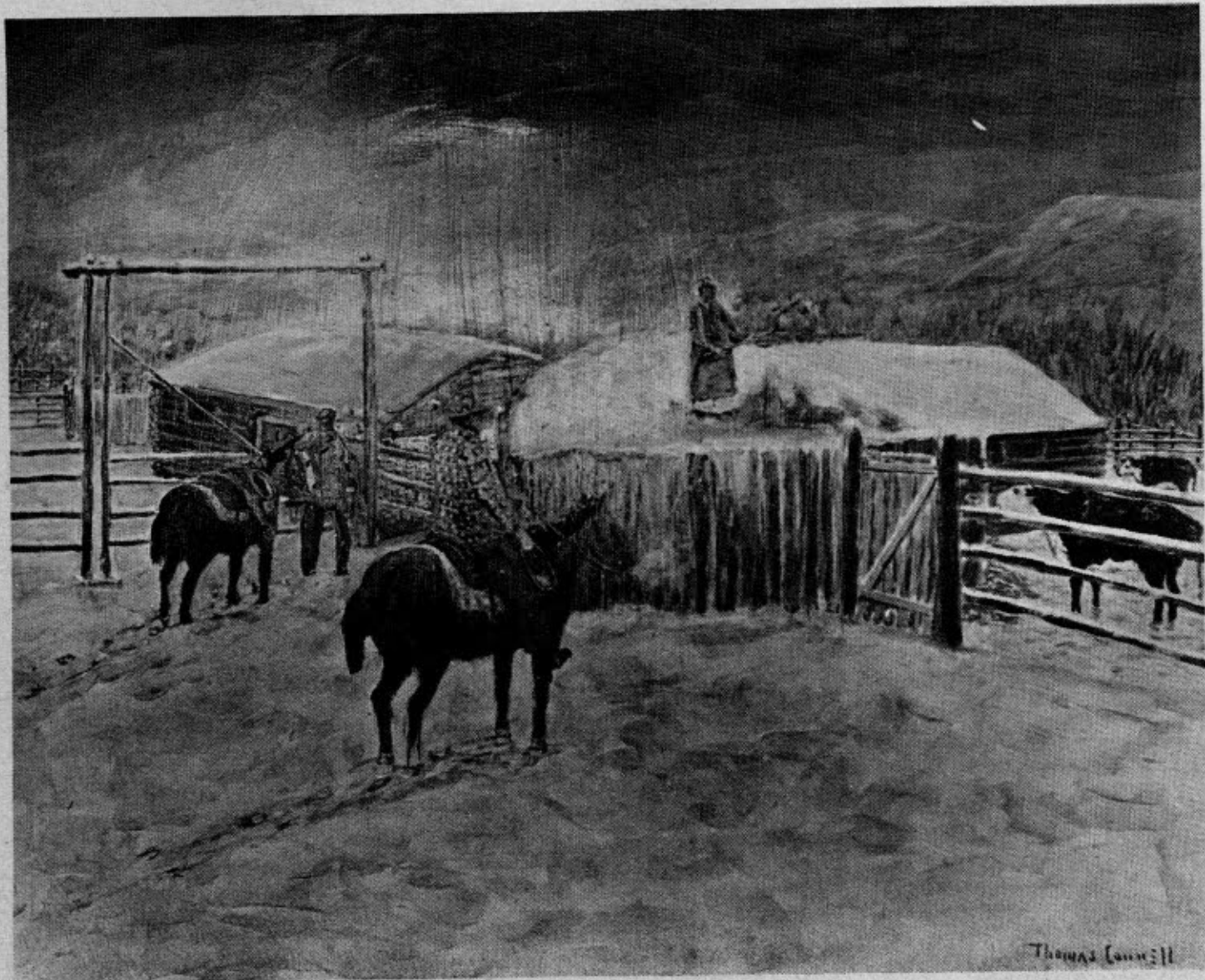
Women also did that seems to be a parable works. And souls they are, of and complementation.

He is a self-made man. He came to Pass City when there was a gold mining craze in the State of Wyoming. He had a small ranch along the Wyoming. He and



The Perils of Washday

24 X 30



Didja Feed the Bulls, Maw?

24 X 30

Thomas Connell

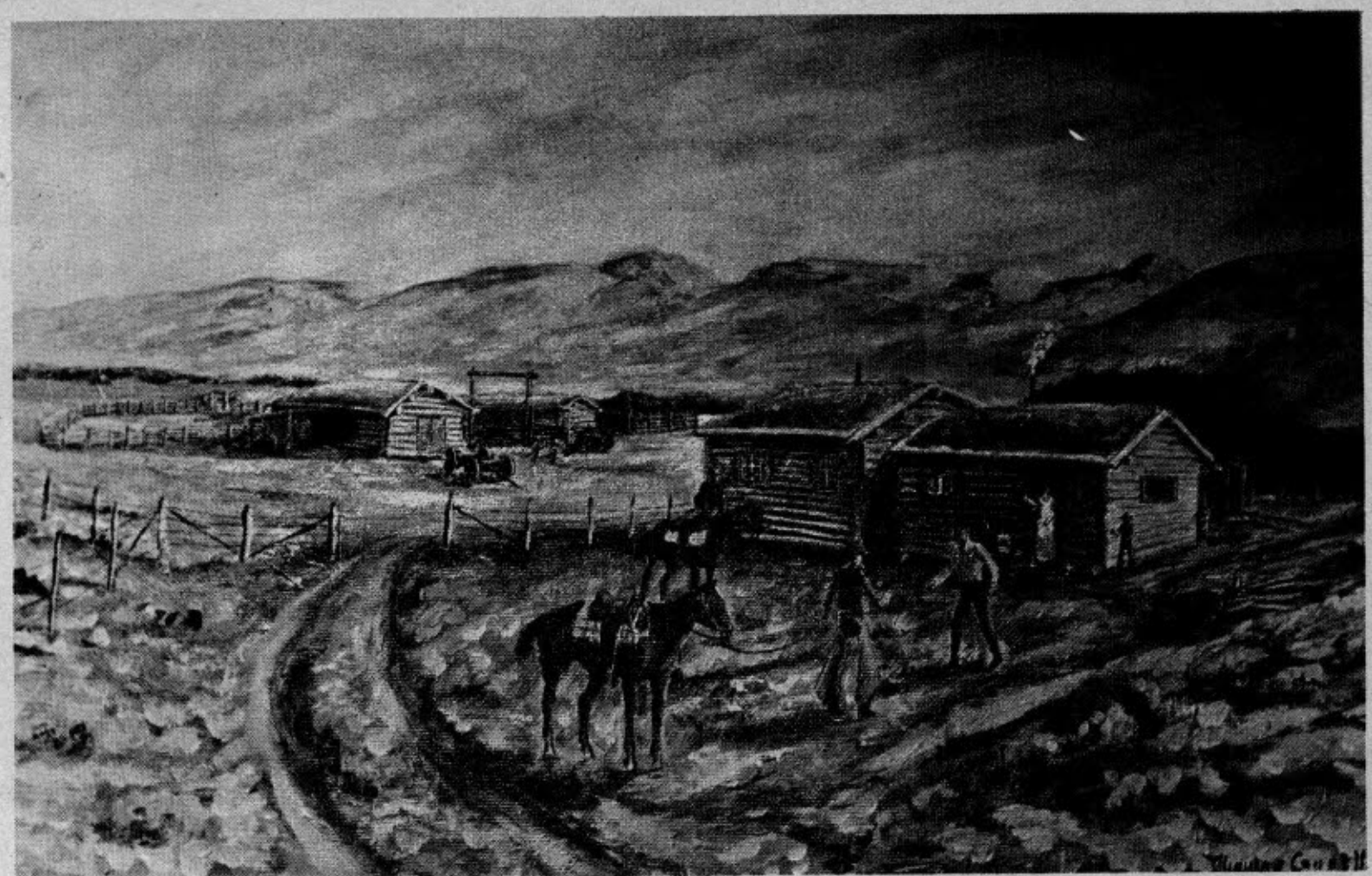


# ARTIST

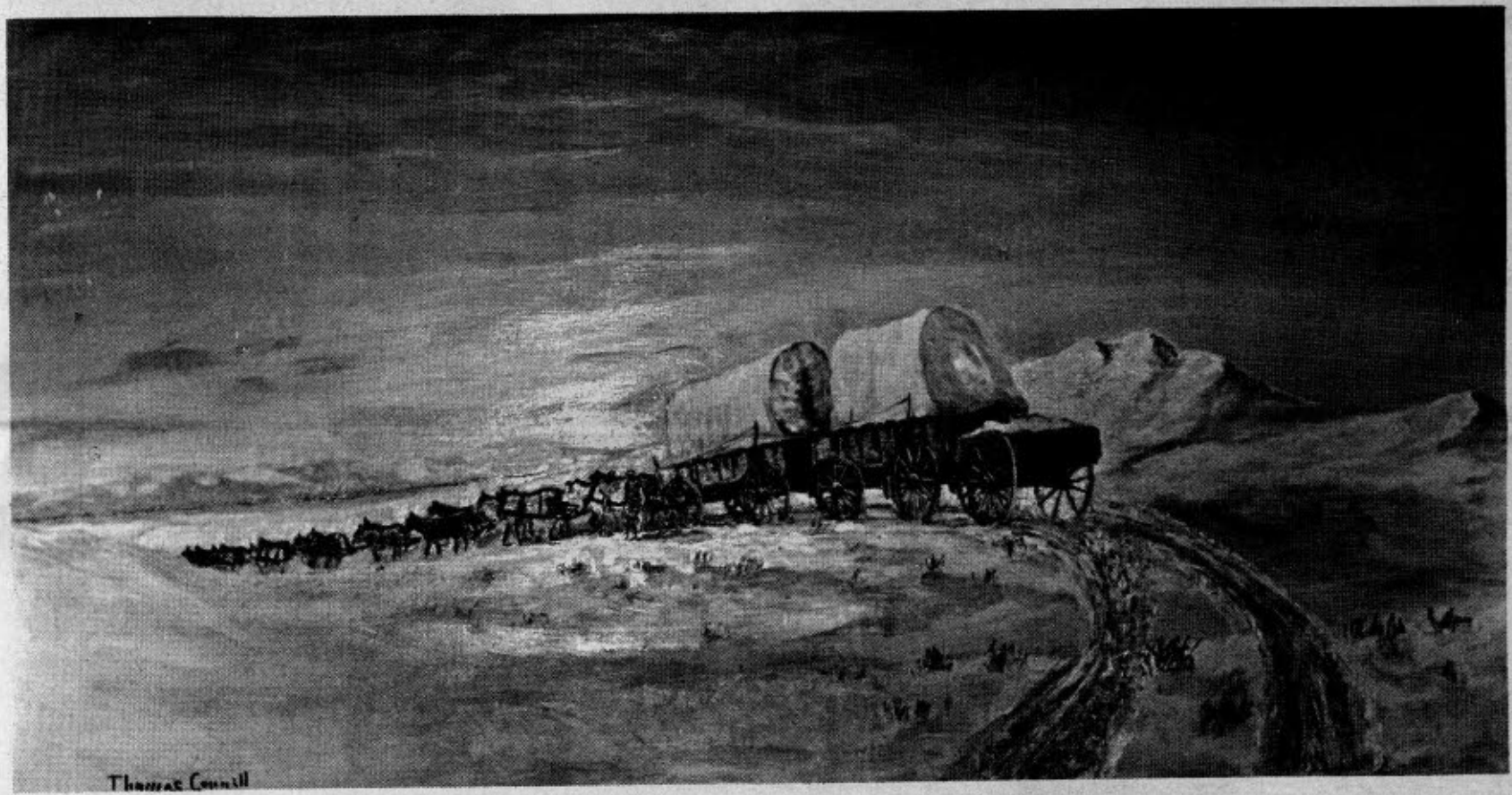
es in bitter cold or howling blizzard. ere fences to fix, fields to irrigate, o do. Connell has correctly chronicled le living of life on the western scene. it wasn't easy and his paintings reflect

omen also appear in his paintings, a fact ns to be an omission in many other com- works. And he shows them as the hardy ey are, often working beside their men mplementing them in almost any situ-

is a self-taught artist, born at South y when that frontier settlement was still nining center in the newly established Wyoming. He grew to manhood on a nch along the Wind River near Burris, g. He and his wife now live in Lander.



An Old Friend Returns 22 X 36



The Freighter 24 X 48



Putting Up the Hay 24 X 40



10—High Country News  
Friday, Jan. 21, 1972

## Sagebrush Spraying Questioned

James B. White, director of the Wyoming Game and Fish Department, has issued a statement opposing certain comments made during a recent hearing regarding sagebrush spraying.

The opposition followed a newspaper account of statements made by Dr. Harold Alley of the University of Wyoming in testimony given at the December Bureau of Land Management hearings on sagebrush spraying on public lands near Casper. According to the report, Dr. Alley said sagebrush spraying "is always beneficial to game," and he stated that game animals do not rely on big sagebrush, the type eliminated by 2-4D, as much as they rely on other types of sagebrush for food.

"These statements are contrary to findings derived from years of study by the Wyoming Game and Fish Department," White said. "Big sagebrush is a very necessary forage plant for big game and sage grouse. We have known for years that big sagebrush makes up the major food of antelope and sage grouse on native ranges in Wyoming and several other western states. In winter, big sagebrush may constitute up to 100 percent of the diet of antelope and sage grouse in our state. Even in summer, sagebrush is a major food item. Antelope eat grass for a brief time in spring and summer, but year-long grass is the least preferred food item both in Wyoming and the 20 other states, Canadian

provinces and Mexico where antelope are found," he continued.

Game and Fish researchers claim antelope density is highest on big sagebrush and silver sagebrush ranges. This can be illustrated by comparing the 335,000 antelope found in Wyoming, Montana, the Dakotas, and southern Alberta and Saskatchewan with the 712 found in the grassland areas of Kansas and Oklahoma while none are found in Manitoba, Minnesota and Missouri.

Wyoming has the largest area of unaltered big sagebrush habitat in the west, and the 190,000 antelope here are over twice the number found in any other single state," White said.

Studies also show antelope productivity is greatest on big sagebrush ranges. Wyoming has a longtime average of 79 to 100 fawns per 100 does, while Kansas reports only 52. In western South Dakota where big sagebrush and silver sagebrush are abundant, 100 fawns to 100 does are commonly produced. Where little sagebrush is found along the Missouri River in the same state, the ratio of fawns to does is only 50:100, and in Kansas—outside the sagebrush range—average fawn:doe ratios are only 43:100, according to department surveys.

White said sage grouse are even more dependent on big sagebrush habitat than antelope are. Sage grouse numbers in the states of Colorado, Wyoming, Idaho and Montana have

declined directly with sagebrush habitat destruction, particularly on and adjacent to nesting and strutting ground areas.

Surveys taken in Wyoming, Utah, Idaho and Colorado indicate many of the major mule deer herds also must depend upon big sagebrush for winter food. Tall, woody sagebrush is available in winter and is far more nutritious than cured grass and many other browse species. This accounts for the high dependency on sagebrush by deer, antelope and sage grouse in snowbound areas.

"Our Game and Fish personnel feel sagebrush spraying can be beneficial to wintering elk and bighorn sheep which prefer grass and other browse—if the areas sprayed are not periodically covered by deep snow," White said. He cautioned, however, that animals such as domestic sheep that depend upon grass would starve when snow is deep. Illustrating the point, sheepmen in the Red Desert area west of Rawlins have had to move over 70,000 sheep that normally winter there as a result of the blizzard that hit the desert in late October of last year.

### Spraying . . .

Applications were made are hay meadows or ranch lands several miles south of where the actual spraying took place. One block of the deeded land for which application was made is an oil field with a small settlement located upon it. It lies on a steep mountainside with very little sagebrush in evidence.

At the end of the hearings, Van Irvine declared he was going to sell the Diamond Ring Ranch (on which there is a one and a quarter million dollar mortgage due to Metropolitan Life Insurance Co.). He said the hearing was such "a flagrant example of the Bureau's determination for punitive action for revenge purposes that the stockholders of the Diamond Ring are going to place the ranch for sale for someone else to deal with such a Hitlerish bureau."

### Not So Strange!

The bobcat took one last step. It put him in position to make the charge and the blue grouse would be his dinner for the night. But the grouse was alerted by this final movement and with four or five short powerful wingbeats it whirred to a 20 foot high perch. Safely in a fir tree.

But the cat was hungry. With as much ease as the grouse, but by a different route, the bobcat moved quickly up the tree. His claws pierced the bark smoothly and rapidly but his efforts were wasted. The blue grouse flapped its wings twice and glided effortlessly to another tree 50 yards downhill.

And on and on this chase could go. The grouse used its long established defensive reaction to evade the predator. Had the pursuer been a fox, coyote, or any other ordinary predator the bird's escape would have been accomplished just as efficiently.

On a nearby mountain another blue grouse is feeding on currant berries. The snap of a broken twig alerts it to the hunter who is approaching. As a chance would have it, the hunters path leads toward the grouse. Whirrrrr!! Safety in a fir tree? Not this time. One shot and the grouse is in the game bag.

Back in town the hunter exclaims, "Durn stupid fool hen just sat there while I potshot it." This type of thinking isn't new. Stories of the adventures of mountain men tell how they would run into a group of fool hens and, by swinging a club, separate enough birds from their heads to make a hearty meal.

What the mountain men didn't know and many modern hunters don't realize is that the grouse reacted in the most intelligent manner possible. For years they have escaped their enemies by simply flying to a branch or gliding away, whichever was the easiest. The predator can't project his fangs or claws as man can project 1-1/4 ounces of size 6 shot.

The list is long. Hunters have often mistaken an animal's natural defensive maneuvers for stupidity. The bunching of bison which protected them from wolves only made them easier targets for the Sharps rifle.

Our game animals aren't dumb. They only react as they know how. Rifles and shotguns are new on the scene and are one more hazard to which animals must adapt.

So when your game vest is heavy or your meat pole sags after a good hunt, remember that the game isn't yours because of a lack of survival capabilities on its part. Firearms have brought hunting from a means of survival to a sport. Let's keep it in perspective and be glad we don't have to try for a blue grouse with our teeth.



This sagebrush-grass antelope and sheep range in Wyoming was sprayed within one mile of the area shown here. The man is pointing to an antelope fawn carefully hidden in the low sage. Spraying is done to kill the sagebrush and increase grasses. In doing so, the natural balance of browse plants and grass are tipped in favor of the livestock. If spraying is to be done on public lands, it should only be done with full regard for the wildlife and other public values.

## Clearcutting Not To Be Restricted

Retreating under fire from the potent political forces of the timber industry, the Nixon administration dropped a proposal to tighten restrictions on clearcutting in the national forests. Timber industry spokesmen met with White House officials on Monday, Jan. 10. Interior Secretary Rogers Morton, Agriculture Secretary Earl Butz, and Chairman Russell Train of the President's Environmental Quality Council announced on Thursday that they would not submit the proposal to the President.

The Council on Environmental Quality had prepared a draft executive order which would not have banned clearcutting but would have put restrictions on where and how the practice was to be used. The proposed executive order reportedly would have applied about 10 criteria.

Timber industry spokesmen strenuously

### Calls Shots . . .

operators who willfully failed to perform contract obligations designed to prevent environmental or resource damage by barring them from further public timber purchases for a period of time.

"Finally," said McGee, "the order would have required the Agriculture and Interior Departments to identify fragile areas unable to withstand timber harvesting or other intensive uses, at least under present technology, and would have provided for their protection until improved methods were available."

objected to one of the criteria which would have banned clearcutting on "areas of great natural beauty." Industry spokesmen also said that such an order would drastically reduce the Forest Service's ability to sell timber from the national forests. They claimed that it would come at a time when sales are already "seriously impaired," and when the nation faced an unprecedented demand for lumber and plywood. Nothing was said about continuing sales of American timber to Japan.

John Turnbull, executive vice president of the National Forest Products Association, said, "Since housing and construction are still expected to carry the economy to higher levels in an election year, this is not necessarily the best tactics."

AIR AND WATER NEWS, in commenting on the rejected proposal, said, "Unfortunately, the timbermen do not seem to have learned from the painful lessons of other industries during the past year. Clear cutting can be a useful tool, but one would have to be blind and dumb to ignore that the tool has been overused, and often used in places where inordinate environmental damage can occur. The industry has successfully fought behind the scenes to prevent Congress from setting aside 'forever wild' scenic wilderness areas over the past eight years. The industry will have no one to blame but itself if environmentalists manage to stop all clear cutting through new legislation, or, more likely, through the National Environmental Policy Act."



# The Bureau Bungled !!

by L. J. Costelloe

The following article is reprinted from OREGON OUTDOORS, November, 1971. The specific situations described here are certainly examples of some bureaucratic bungling. However, such criticism of the BLM cannot be applied across the board. It is reprinted here to indicate again a lack of communication between land administrators and the people whose land and resources are being administered.

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BLM - The Bureau of Land Management. The comparatively new bureaucratic monster that bosses nearly two-fifths of the land in the United States. BLM - the all powerful, all-knowing agency that can improve on nature; that can modernize a wilderness to death; that can spend the taxpayer's money for foolish, unnecessary installations that offend the eye, insult the intelligence and flatten the pocket book of every honest outdoorsman in Oregon. That's BLM.

Well, that was quite a tirade and not typical of OREGON OUTDOORS. It will probably step on toes, offend my best friends and cause me to get my ears batted down until I look like a Bassett-hound. Oh, well. Any change in my looks will probably be for the better.

Would you like to know what brought all this on? There are the stories of the blue toilets, the situation at Anderson ranch and the Kelsey Creek bridge to name a few of the causes.

We (Montana and I) made a trip on the Rogue River trail especially to see the robin's egg blue (or is it sky blue) toilets after Bob and Pat Straub alerted us.

When they stopped to see us after a weekend on the Rogue River trail Bob burst in almost as though he were in physical pain, with the query, "My God, Digger, do you know what the BLM is doing to the Rogue River trail?" I didn't know then but I do know a little about it now. I'll probably never know the whole story but I know what I saw and what the people (river guides, residents, caretakers, and landowners) told us. I do know there are some lovely spots that have been transformed into eyesores. And I do know I don't like it.

Blue fiberglass-and-plastic toilets that can be seen for miles are no joke but let us examine a few dollar signs. When I got home I called the Los Angeles firm that supplied these little dandies and learned this:

Eight toilets were shipped to the BLM Medford office on a rental basis. (The company does not sell these little gems).

Cost of freight to Medford ----	\$546
Chemicals to service toilets - - -	50
Rental per month on each toilet -	45

People on the Rogue told us the toilets were placed by helicopter and we assume they will be serviced monthly the same way. What does it cost to run a helicopter? A call to the airport got us no specific answer but the man said to figure \$110 an hour, minimum. You figure the cost per unit and the total cost - I'm sick.

And that isn't all, kids. Someone was sold a bill of goods. The little buildings have very nice screened ventilators at the bottom and a continuous screen all the way around the top to keep

the bugs out but the doors don't fit. You could throw your hat through the crack at the top of the door hinges on the three we inspected. Yes, the bugs had found the holes. Spiders, beetles, flies and crickets were safely sheltered from the elements. So were some big yellow wasps with stingers a half inch long.

So - the BLM has improved on the little split-shake shanty the miners so cleverly hid behind a bush. The little shanty that served Oregonians for a hundred years; that was built right there from materials nature provided. A real Oregon woodsman with an axe, saw, shovel and frow can build an adequate one-holer in two days that will last for twenty years. A primitive structure in a primitive area.

To quote from the Wild River Classification spelled out by Congress and printed on a brochure put out jointly by the Forest Service and BLM - "The objectives of this classification are to provide river-oriented recreation opportunities in a primitive setting and to preserve the river and its immediate environment in a natural, wild, and primitive condition essentially unaltered by the effects of man."

It is my contention that blue plastic toilets, especially when placed in the center of a natural prairie, do essentially alter the primitive conditions and most certainly do use up a hell of a lot of taxpayer dollars.

The Anderson Ranch, a beautiful place at the mouth of Mule Creek, about a mile up the river from Marial was originally the Billings homestead. Since the Rogue was included in the National Wild Rivers System, the BLM has bought the Anderson ranch. The ranch is not being used. The house is locked up. The fences are going down and the weeds are growing up. A caretaker lives on the place but he says he can do nothing because he has neither the tools nor the authority to act.

We were denied the right to park our car on the Anderson ranch while we walked to Quail Creek and back. The drift boaters are denied the right to pull a boat out of the river on the Anderson ranch.

After the owners of this place had used the water for nearly a century the BLM decided it wasn't good water so drilled a well. It wasn't really a well - just a three hundred foot dry hole. Our local well driller told me he gets \$12 a foot here in Winston for drilling wells but he wouldn't even guess what it would cost 80 miles out in the boondocks.

I don't know what the BLM paid for the Anderson ranch but rumor on the Rogue river puts it at \$170,000 to \$190,000. The only use so far has been for a meeting of some big shots (six helicopter loads of them). Is the ranch to be a quiet meeting place or even a private fishing lodge for a few of our peerless public servants?

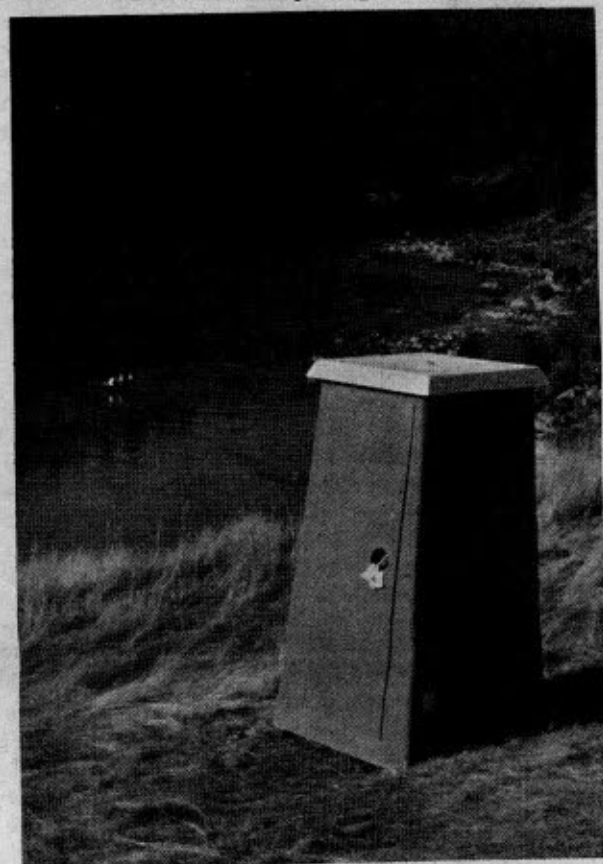
But the story of the Kelsey Creek bridge tops them all. Kelsey Creek is probably the largest of the creeks the Rouge River trail crosses in the Wild Area. From April to November any able bodied person over ten years old could cross it on the rocks or at the worst could wade it. For fifty years there was a log bridge to accommodate winter traffic. Pack trains were then used to supply settlers and miners but now all supplies go by river boat. One can safely say there is no through winter traffic on the Rogue River trail.

If there were a need for a bridge here in this wild area wouldn't a pioneer type bridge - a log with the top flattened be enough? But no! The BLM built a cementbuttressed, treated timber monstrosity that is probably the most unnecessary installation in Oregon. At what cost? Local rumor sets the price at \$27,000. One man, a highly successful business man, laughingly suggested the BLM make a toll bridge of the Kelsey Creek installation. At a dollar a person the taxpayer's money might be recovered in - say about 40 years.

Blue toilets and BLM bridges are subjects of merriment on the Rogue. The BLM is a laughing stock in its own domain. Probably no other government agency that affects the activities of the Oregon outdoorsman has such a poor public image.

For myself, I consider it a sad day when the land exchange between the National Forest and the BLM gave that stretch of the Rogue River trail to the BLM. The agency that so lavishly spends the taxpayers money but won't let that same taxpayer park his car or land his boat on the property he paid for.

Photos courtesy Oregon Outdoors



Bright, blue toilets set amidst a grassy glade along a wild and scenic river do very little for the aesthetics. Or "to provide river-oriented recreation opportunities in a primitive setting and to preserve the river and its immediate environment in a natural, wild, and primitive condition essentially unaltered by the effects of man."

## Earth Week, 1972

WASHINGTON, D.C. - Sen. Gaylord Nelson has reported that twenty Governors have already responded that they will proclaim Earth Week this year.

Earth Week will be April 17-23. The national environmental observance was proposed and organized by the Wisconsin Senator as Earth Day in 1970.

Earth Day drew massive involvement as a peaceful demonstration of environmental concern.

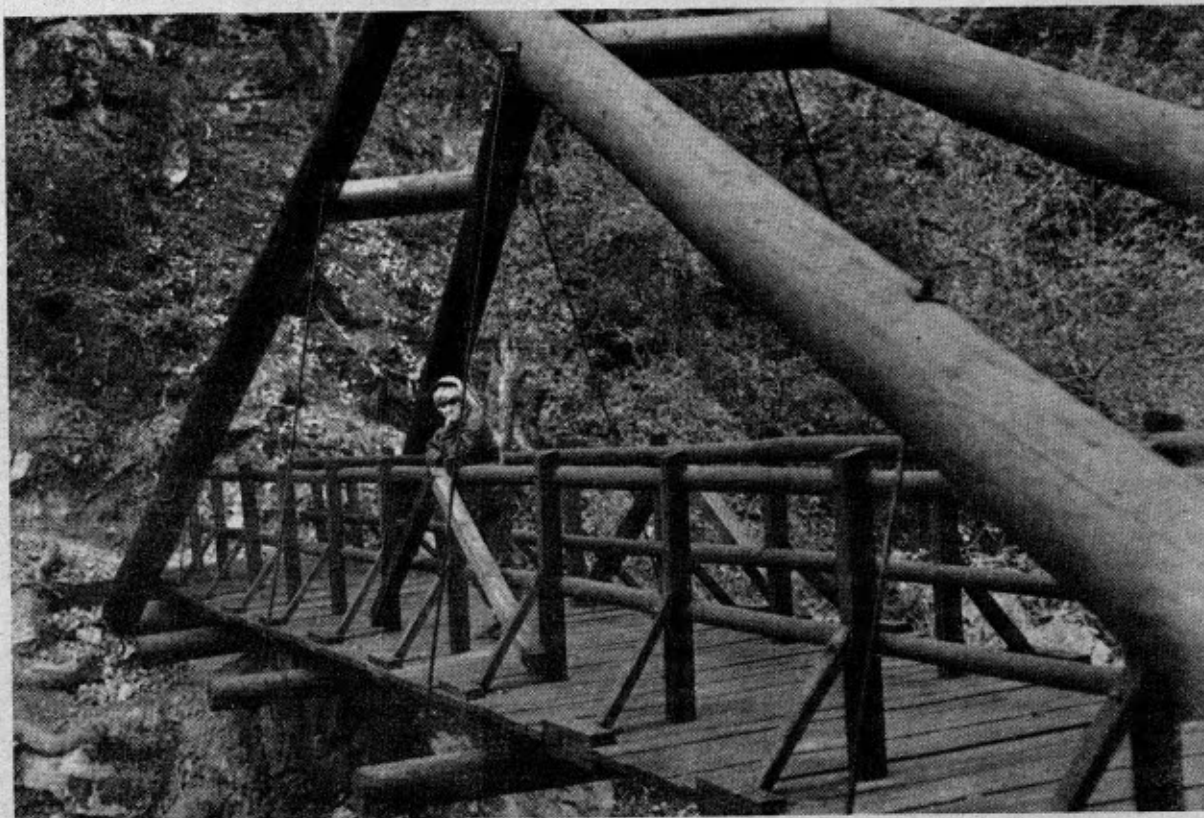
Earth Week, 1971, was proclaimed by the President, 40 Governors and many Mayors, in addition to being widely supported in both houses of Congress.

The Wisconsin Democrat said he is optimistic that Earth Week this year will be just as widely proclaimed as it was in 1971.

With the 1970 and 1971 observances as successful precedents, Nelson said Earth Week this April can serve as an occasion for community level environmental inventory and review, special public and media reports on environmental progress and needs, and strengthening environmental education.

In this election year, Nelson also said Earth Week should provide the launching point for a nationwide effort by citizens to assure that a commitment for environmental action is written into political party platforms and included in the program of candidates for public office.

The states whose Governors have informed Nelson of Earth Week plans in response to a letter of inquiry range from Alaska to Oregon to New York to Florida.



In a national park where it might be used by a thousand people every day this bridge across Kelsey Creek along the Rogue River Trail in Oregon would be appropriate. On a wilderness trail that probably serves half that many people in a whole year, it cannot be justified.



# Administration Watching

by Jim Rathlesberger

The House Subcommittee on Special Problems of Small Business has issued a new report (House Report 92-719) which criticizes the Department of Justice for approving a series of mergers between the major oil, coal and uranium companies. Noting that the large oil companies now control 72% of the nation's reserves of natural gas, 30% of our coal reserves, and over 50% of our uranium reserves, the report calls on the Justice Department to "embark upon a course of vigorous enforcement of present antitrust laws in order to restore competition to the energy market."

The Subcommittee reports that the concentration within the industry may result in the dwindling of available fuel supplies, and may have substantially contributed to recent increases in fuel prices. Such price increases, says the report, have a severe impact on consumers through sharp hikes in electric and natural gas utility bills.

In related action, the Federal Trade Commission (FTC) is studying the energy mergers with a view towards possible prosecution even though they have been approved by the Justice Department.

The House Small Business report also criticizes the Federal Power Commission (FPC) for granting rate increases worth \$4.5 billion to natural gas producers on the basis of gas shortages projected by industry estimates. Critics have charged that the oil companies are hiding gas reserves until they can obtain higher prices. The FPC is thus beginning a new review of the natural gas industry, and will concentrate on the issue of reserves. The oil companies, claiming that the FPC has artificially set the price of wellhead gas too low, argue that there is not enough incentive to stimulate exploration and development, which have been falling off since the mid-1960's. Even the new \$4.5 billion increase, they claim, is not enough. That increase is, however, being investigated by the FTC, which believes it may be unwarranted.

Reports to the FPC from the interstate natural gas pipeline companies warn that there might be severe shortages of gas this winter. Natural gas may have to be rationed on an unprecedented scale, they say, and some of the nation's industrial plants may be forced for the first time to temporarily close down their operations. "There's no doubt the situation is somewhat tighter this year than ever before," says the chief of the FPC's Bureau of Natural Gas, Thomas Joyce, "and if we have an unusually long and cold winter, the results could be very rough indeed." Homes, hospitals, and other human needs, however, are not expected to be affected. On the other hand, the FPC reports that electrical power shortages, causing brownouts or blackouts, are less likely this winter than last. Shortages are possible, however, in the East Central and Pacific Northwestern areas. The FPC says the situation in these two areas will depend on the availability of coal and nuclear power.

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The Interior Commerce Commission (ICC) has "postponed indefinitely" new procedures which would have made it easier for transporters to obtain certification and authority to haul recycled materials. Requests for such authority would have been expedited, and carriers no longer would have had to pay expensive filing fees or go through lengthy hearings. The Commission had granted time for all parties to comment on the rule, but the railroads have requested additional time.

Efforts to recycle have also been frustrated by discriminating freight rates, which are higher for used materials than for new materials. Such discrimination is unlawful under the Interstate Commerce Act, but the ICC has consistently refused to intervene. George Stafford, the ICC's Chairman, says "we must respectfully disagree with the viewpoint . . . that virgin commodities and such commodities in their solid waste form should be considered as the same commodity for ratemaking purposes, and that the maintenance of charges on the former lower than those on the latter constitutes an unlawful discrimination." The Commission has recently been petitioned by Students Challenging Regulatory Agency Procedures -- SCRAP -- to reconsider recent rate increases which continue this discrepancy. One basis for the petition is that the ICC has issued no environmental impact statements for the increases which it has granted. The Senate Commerce Committee is also considering legislation to correct the discrimination.

# Helicopter Pilot Charged

In what could only be described as a curious turn of events, helicopter pilot James O. Vogan has been charged by the Wyoming Game and Fish Commission with game violations. The pilot who testified before a Senate subcommittee in Washington that he had been involved in killing eagles and game animals was charged with 12 misdemeanor counts.

The charges are in connection with illegal killing of game animals while Vogan was piloting a helicopter on eagle shooting missions. Vogan had testified to the killing of deer, elk and a bear.

Vogan himself raised the question of why he was being prosecuted ahead of some of the people he had identified as gunners. He also said it was strange the charges should be filed so long after his testimony was given (August 3-6, 1971).

Vogan repeated again, as he had last fall, that he had informed state officials of mass eagle killing at least six weeks before he went to Senator Gale McGee.

Vogan claims to have been granted immunity from state charges in conversations with Wyoming Game and Fish Director James B. White and Department Attorney Don Hall. Hall denies having given "formal immunity."

Vogan says he thinks there is an element of vengeance in his treatment because of the adverse publicity his testimony brought. He also has expressed the opinion that Governor Stanley K. Hathaway is using his office to "cover up" for the ranchers involved.

In the meantime, a Ten Sleep, Wyoming, rancher, Cameron Taylor, pleaded no contest to four violations of state law, including hunting bald eagles, and was fined \$250. Norman Devilbiss, whom Vogan had identified as an eagle gunner on the Taylor ranch, also pleaded no contest and was fined \$50 on a charge of illegal possession and transportation of an elk. Still, a third man, Chester Pearce of Ten Sleep, was fined \$50 on a charge of hunting a bald eagle after pleading no contest.

Vogan testified in August that Taylor, Devilbiss and Pearce had been gunners on eagle shooting missions when 75-100 eagles were killed, as well as six elk. Vogan said they had given him one of the elk for his own use.



## Concepts Changing

Glacier National Park, among others, is looking more to environmental problems than to increased travel concepts.

In the changing concepts of park management, Glacier no longer plants fish. Planting fish on a put and take basis is now held to be not in keeping with national park philosophy.

One campground with 37 sites has been closed during the past season. The closure was done to permit revegetation and to avoid further environmental damage. Park policy is now aimed at encouraging further campground development in adjacent areas outside.

Increased surveillance reduced injuries from bears and resulted in two people being fined \$25 each for feeding bears. There were no grizzly incidents.

On Jan. 14, the first sentences were imposed on federal charges of killing eagles. Two Utah men brought before U. S. District Judge Ewing T. Kerr at Cheyenne entered written pleas of guilty.

Henry Muzalski of Murray, Utah, was fined \$100 on two counts of killing golden eagles and given a six-month suspended jail sentence.

Jack S. Howard of Salt Lake City was fined \$100 on each of two counts and given a six month suspended jail sentence. He was also placed on six months probation for six other counts.

Gary and Larry Haizlip, twin brothers of Murray, Utah, appeared before Judge Kerr on Jan. 20. Larry pleaded guilty to one count of killing an eagle and was placed on six months probation. Gary pleaded guilty to two counts and received the same sentence.

U. S. Attorney Richard Thomas told High Country News that he was working "on what I call the main case. He said he expected to file charges in that case early in February."

## "..Noted & Quoted.."

"I appear before this body as a former West Virginia State Senator who played a significant role in drafting the 1967 West Virginia Surface Mine Act. This Act stood, and now stands, as the most stringent legislation ever enacted to control the strip mining of coal and to assure reclamation of the damage done by this particular mining method.

"Neither production nor destruction has been curtailed. Whether the industry is uncontrollable or whether a good sound law is unenforceable, or a combination of both - I don't know. But take it from one who from bitter experience can tell you - any step short of limiting the extraction of coal to methods other than strip mining, is not going to work, if West Virginia is seen as an example. The very industry which now insists that reclamation can work will see to it that it won't. The cost of good reclamation is prohibitively expensive, and higher profits is the name of the game."

Paul J. Kaufman, Charleston, W. Va.  
Testimony before House Subcommittee on Mines and Mining  
November, 1971

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"Emission limits on sulfur oxides are tightening, and electrical utilities are demanding ever greater quantities of low sulfur fuel. Seventy-five percent of all the coal that was strip-mined in 1970 was burned by electric utilities to produce about 34 percent of all the steam-generated electricity in this country. Some 80 percent of the nation's reserve of low-sulfur fuel lies beneath the western states. As utilities consume more and more low-sulfur coal, and as the national coal gasification program gets under way, strip mining in the West could assume colossal proportions."

H. Martin Malin, Jr.  
Assistant Editor  
Environmental Science & Technology  
January, 1972



More and more concern is being expressed at the monopolistic trend in energy companies. Large oil companies now control 30 percent of the nation's coal reserves, mostly in the western states.



**THE WILD WORLD**  
by Verne Huser

I had just finished writing an article for NATIONAL PARKS AND CONSERVATION MAGAZINE on the overdevelopment of Yellowstone National Park when I received my Jan. 1, 1972 issue of SATURDAY REVIEW with a lead article entitled "National Parks: Pristine Preserves Or Popcorn Playgrounds." Why, that was my theme! Someone else agrees with me.

Gladwin Hill says that "Basically, there aren't enough parks and they aren't run right." There is roughly a tenth-of-an-acre per person in these United States, and many of those acres are devoted to trailer spaces, hot dog stands, dune-buggy rentals and water-skiing courses, according to Hill.

The basic problem, he says, is that the Department of the Interior has never resolved the ambiguity inherent in preserving for public use. How do you preserve while using without abusing? When the National Park Service was established in 1916, it was given the job of conserving "the scenery and the natural and historical objects and the wildlife therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."

Some find this statement ambiguous, but it is clear to me: no development that will impair the park's values. In the first directive ever sent by a Secretary of the Interior to a Park Service Director, Franklin K. Lane outlined administrative policy for the parks in a May 13, 1918 letter to Stephen T. Mather as follows: "First, that the national parks must be maintained in absolute unimpaired form for the use of future generations as well as those of our own time (italics mine)." This again seems clear enough to me: nothing relative about it; he said absolute.

But then Lane added a couple of loopholes that have all but destroyed our parks even before we reach the Yellowstone Centennial (March 1, 1972): "second, that they are set apart for the use, observation, health, and pleasure of the people; and third, that the national interest must dictate all decisions affecting public or private enterprise in the parks." National interest! That's the loophole through which they are trying to build the Alaskan pipeline, and through that loophole you could mine gold (or copper) in the Hayden Valley.

Lane tried to clarify the ambiguity, perhaps, when he wrote further, "Every activity of the Service is subordinate to the duties imposed upon it to faithfully preserve the parks for posterity in essentially their natural state," but then he added a further ambiguity: "The commercial use of these reservations . . . will not be permitted under any circumstances" except—"except as specifically authorized by law (and laws governing the parks include political pork barrels) or such as may be incidental to the accomodation and entertainment of visitors."

Why on God's green earth must visitors be entertained in the parks? Is that why they were set aside? Back to Hill's article in SATURDAY REVIEW, which talks about "pressures to get the schlock out of the national parks," and of the ten-year plan called "Mission 66" as "a misguided spasm of political cosmetology."

What do we want our national parks to be? They were set aside because they were unique, but through the development we have perpetrated, we have destroyed their unique qualities by creating a sameness. Oh, we still have Yosemite Falls and Old Faithful and the Grand Teton, but when you bring the beer garden and the laundra-mat, the corner drug store and a fancy swimming pool into the park, how does it really differ from what you left at home?

Try this one on for size: phase out all tourist facilities in the parks except the visitors' centers, which are designed to interpret the park to those visitors. Develop a monorail system for zipping people through the parks, and remove all roads. (I guess we will have to leave the existing through highways.) The monorail system will function in winter without having to plow roads, and it will keep the visitors merely visitors rather than intruders as so many are today, driving elk and moose and buffalo right off their range and killing bears (indirectly) by feeding them.

If someone wants to backpack or ride through the park and take his chances with the bear and the buffalo, fine—let him, but don't allow any luxurious overnight accomodations to exist in the park. Present tourist centers in the park were built for the horse-and-buggy days, and them days are gone forever. Frankly, I'd like to get a little dialogue going on this theme for removing facilities from the park—any takers?



Photo by Marjorie Higley



"... the national parks must be maintained in absolute unimpaired form for the use of future generations as well as those of our own time." FRANKLIN K. LANE, SECRETARY OF THE INTERIOR, 1918. Master plans and wilderness proposals for Grand Teton and Yellowstone National Parks will be discussed at public hearings in March.

## Dialogue on Resources

The following letter is self-explanatory. So that the reader may know what Mr. Deshler, Supervisor of the Bridger National Forest, refers to in his first paragraph, it is reprinted here: "Public lands are supposed to maintain a number of different, and often conflicting, activities under the multiple-use concept. Clearcut timbering, as practiced on the Bridger National Forest in Wyoming, conflicts with wildlife use. Sagebrush (in the foreground) may be sprayed to increase forage for domestic stock but diminish or destroy wildlife habitat. Both clearcutting and spraying may have an effect on water run-off and water quality. Whatever Man does on the public lands must be done carefully and only after careful consideration of all other values." The photograph accompanied an article entitled Increasing Attention on Public Lands.

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Dear Tom:

Your December 10 issue of "High Country News," page 7, carried an article concerning use of public lands. Included was a picture illustration together with a caption that depicts clearcutting of timber on the Bridger National Forest as being in conflict with wildlife use.

Since this implication leads to the conclusion that timber is harvested at the expense of wildlife and without due consideration therefore, I want to comment on clearcutting timber as it relates to manipulation of vegetation and management of wildlife.

Dense stands of coniferous forest are often referred to as biological deserts. This is true simply because plants require solar energy to manufacture food through photosynthesis. If sunlight is intercepted by the coniferous overstory before it reaches the forest floor, life processes within the understory vegetation are retarded or curtailed. Plants that do survive are shade grown, sparse, and unproductive. Conversely, opening the forest canopy by natural or artificial means admits sunlight, stimulates vegetative growth, and wildlife habitat is improved.

Historically, fire has been the major process used by nature to harvest the forest crop. Although often violent and always wasteful, fire opens the forest canopy and sets the stage for natural plant succession back to preburn community structure. Skilled hunters have long recognized that old burns in various seral stages of ecological succession support abundant game populations for several reasons. Most obvious is the increased production of available forage and browse plants. But this is an over-simplification of a complex process of nature and only provides a partial answer.

"Aldo Leopold, widely known for his contributions to the field of wildlife management, defines game in his book, *Game Management*, as "a phenomenon of edges." This affinity of game for edges, or more specifically, where the types of food and cover which it needs come together form the basis for modern game management through manipulation of vegetation to provide optimum edge.

Of the various silvicultural methods em-

ployed to harvest timber, clearcutting offers the best opportunity to create economically the "edge" or diversity of habitat essential for optimum production of many wildlife species. Several hundred acres of overmature lodgepole pine are harvested annually within the Bridger National Forest. Most of this is done through clearcutting followed by burning the residue. Perhaps similar wildlife benefits might be achieved by burning several hundred acres of forest in as many or more controlled burns, but not without tremendous waste and an unjustifiable expense to the American tax payer.

This is not to say that indiscriminate use of clearcutting cannot have an adverse effect on game. The potential for conflict is present and most certainly could occur if basic considerations such as migration routes, calving areas, wallowing holes, escape routes and cover, location of permanent roads, and hunting pressure are not fully coordinated in location and design of cutting units. But to flatly state that, "Clearcutting is in conflict with wildlife use . . ." is an unjustifiable indictment of a badly needed tool to manage evenaged stands of lodgepole pine in Wyoming or elsewhere.

L. Jack Lyon, Wildlife Research Biologist, states on page 22 of the Forest Service Publication, "Forest Management in Wyoming," - "Properly designed clearcuts can be used to provide productive forage areas for big game and thereby increase the basic carrying capacity of Wyoming big game ranges." Opportunities such as this are the spawning grounds for multiple use of wildland resources which, in turn, is the governing objective of managing the timber resource on the Bridger as well as other National Forests.

The article also indicated that spraying of sagebrush could "increase forage for domestic stock but diminish or destroy wildlife habitat." We believe a great deal of progress has been made in the last 10 to 12 years in the evaluation of proposed sagebrush spray projects to avoid conflicts with wildlife. Both Forest Service and State wildlife biologists are consulted to assess wildlife uses and needs on each area proposed for spraying. Their recommendations for feedways, protective cover, and other areas to be left unsprayed are incorporated into the project plan.

Equipment presently used in spraying operations on National Forest lands gives a greater degree of control than was formerly attainable when an airplane was used. Helicopters and ground rigs have been used exclusively on the Bridger National Forest since about 1960. Although more expensive, they normally provide the degree of control necessary to protect willows, aspen, feedways, and other wildlife habitat designated to remain unsprayed. Gusty winds and high temperatures can cause unexpected burning of small patches of willows or aspen, but these areas have been small and scattered with the trees or willows returning to normal within one or two years.

As pointed out in the article, "both clearcutting and spraying may have an effect on water runoff and water quality." To avoid

(Continued on page 14.)



### Thoughts

from the

### Distaff Corner

By Marge Higley



I stand corrected! A few weeks ago I wrote of the seasonal changes here in the high country. I mentioned a letter from a friend in one of our "balmier climes" where the change from one season to another passes "almost unnoticed."

Today, I received a letter from a reader who lives in a small town in the southeastern part of Arizona — which can certainly be classified as having a balmy climate. This is desert-type country, well-known for its cotton and its fruit trees.

"When spring comes, here in the desert," writes Mrs. Mattie Logan, "the hills are green with new grass, and the desert floor is covered with yellow and orange poppies. The palo verde is a brilliant yellow, and vivid red ocatilla blooms along the roadsides. Stiff-leaved yucca is crowned by clusters of creamy white blossoms."

Mrs. Logan goes on to say that mornings and evenings are cool, and the days are warm. (In that part of Arizona, any temperature below 50 degrees is cool; a warm day might be in the 70's or 80's, and it's not really considered hot unless it's in the 90's or 100's.) In the gardens, the roses are at their most abundant, and orchards are bright with blossoming peach, pear, apricot and plum trees.

In the summertime, the fields are green, and covered with pink and yellow cotton blossoms. The fruit in the orchards hangs ripe and heavy. During the hot sunny days, the desert turns brown, but seems to spring suddenly back to life following a violent summer rain or hail storm.

When fall comes to that part of the desert, the mornings and evenings are cool and crisp, while the days remain hot — "something like Wyoming's Indian summer." The autumn skies are clear, and a brilliant deep blue.

In the winter, the desert is not without occasional snow and freezing temperatures. "After a hard freeze," writes Mrs. Logan, "my dahlias and most of my other flowers turn black. The cotton plants lose their leaves, and the fields are white with cotton, ready for harvest. The trees are bare, and the sky is paler than it is in the fall. Even in this sunny climate, we do notice the changing season."

Thank you, Mrs. Logan, for your nice letter. And thank you, too, for making me realize that each of us is probably more aware of every little change, in our own cherished spot.

Several years ago I traveled through the southwest desert, not far from your home. It was in early June, and I remember seeing the tall saguaros with wreaths of tiny blossoms at the very top, making me think of a large woman wearing a too-small spring hat! The bright ocatilla was indeed beautiful, blooming along the roadsides. I hadn't exactly expected sand dunes for miles and miles, but I was quite surprised at the abundance and the greenness of the desert vegetation. I know now that my impression of your desert was based on one small facet of an ever-changing scene.

The next time I'm traveling through new and unfamiliar territory, I shall try to be more perceptive. To those who know and love it, the land (be it mountain, desert, prairie or seaside) may have many moods — changing not only with the seasons, but with each hour of the day.



### Poisons for Pests

Poisons are intended for pests—not people—but both often are affected. Chemical poisons should not be used for pest control unless absolutely essential for health or economic reasons. Chemical poisons should never be used for nuisance pests such as midges or mosquitoes.

Never dispose of pesticides by emptying them into water supply. The substances eventually find their way into streams and lakes and even the ocean.

#### ACTION YOU CAN TAKE:

- Use only recommended dosages.
- Use at the proper time of the year.
- Avoid direct contact with pesticides used including the mists.
- Apply carefully and only where necessary.
- Plant for variety. Chances of an insect outbreak can be reduced by planting a mixture of trees, shrubs or garden plants instead of a single species "monoculture."

## Dialogue . . .

creating extreme peak flows as a result of clearcutting, a requirement that no more than one third of the timbered area of a drainage may be harvested at any one time is being used on the Bridger National Forest.

Regional policy has provided that not more than one half of the timbered area of a drainage should be harvested to avoid damaging peak flows and deterioration of water quality. Our policy of not cutting more than one third is well within this recommended limit. The limitation of cut block size to 35 acres or less, will also reduce the effect of clearcut blocks on water infiltration and subsequent stream flows. We have experienced practically no overland flow from any clearcut areas, regardless of size.

No restrictions have been placed upon sagebrush spraying from a runoff standpoint. Most of our projects consist of small, scattered, irregular shaped areas to be sprayed. Studies conducted in Wyoming and reported in H. P. Alley's bulletin on Big Sagebrush Control show strip-spraying did not increase the amount of snow caught and held in either the unsprayed or sprayed strips. We believe the size and shape of most areas recently sprayed on the Bridger would be comparable to the sprayed strips.

In summary, Tom, I do not believe that either timber harvesting or sagebrush control has had any deleterious effects on our wildlife population. Elk populations — and animals killed — are higher than ever and apparently increasing. Moose, elk, and deer are continually observed using cutover areas. Deer and elk both heavily utilize areas where sagebrush has been controlled, particularly in the early spring. Consequently, I think pictures and captions such as the one referred to herein do a disservice to both the public and the agency. I trust that this type of unobjective reporting is not going to be the trend in High Country News, which I have considered to date to be a pretty well done and factual newspaper.

Sincerely,  
Bill  
WM. O. DESHLER  
Forest Supervisor

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Dear Bill:

I apologize for the unqualified, unequivocal statement in the referenced photo caption. If I would rephrase the caption to read, "Some clearcut timbering, as it has been practiced mostly in the past on the Bridger National Forest . . .", I think it would have been much better.

I would certainly have to agree that clearcutting in small patches if done with all other values considered, CAN be beneficial to game populations. It is not always, as you have agreed in some of your recent administrative decisions.

It has been my observation that there are few forested areas in Wyoming which are so extensive and so dense as to be classified wholly as biological deserts. And what few good blocks of heavily forested areas remain are usually significant for remaining elk herds as escape cover.

As you and I know also, the limiting factor in total habitat consideration for both deer and elk is winter range. For the most part, deer and elk herds leave the heavily forested areas to winter on the open slopes at lower elevation. So the key to maintaining elk herds is not to provide more summer range but to retain key wintering areas, key escape cover, and enough unroaded areas to provide minimum requirements. Timbering roads, whether it be for the clearcutting method or selective cutting, has provided hunter access into the heart of some of Wyoming's last-remaining, choice elk habitat.

Sagebrush spraying is pretty well covered elsewhere in this issue. I am not an advocate of spraying, but in all fairness, I would have to admit that if all other environmental considerations are met, judicious spraying can increase grasses.

I would not want to argue the point of clearcutting and spraying causing increased water runoff. Let's just say that much clearcutting done in the past has undoubtedly resulted in some water-runoff changes, and that spraying also has changed the pattern. But I

### Letters . . .

1969 that the people could get a handle on the situation. Two years later, the company finally got dust control equipment installed.

Yes, the mining industry or any other industry can take pride in what it is doing so long as its operations do not degrade or destroy what is left of Planet Earth. And that includes Lake Superior, tiny remnants of wilderness, Laramie, or any of a thousand other trouble spots.

think what is even more significant is that we really don't know. The clearcutting and the spraying have gone on without enough research being done to document what has happened to water flow patterns, soil nutrient loss, and other ramifications.

I would have to take exception to your last statement that timber harvesting or sagebrush control have not had any deleterious effects on our wildlife populations. The various game and fish departments have enough evidence in hand to prove otherwise. The Oregon Game Department is now engaged in some specific research on forest roading which should bear out earlier research. And that was that some elk populations have suffered considerable losses as a consequence of forest timbering practices.

The same can be said for sagebrush spraying. Removal of sagebrush from critical winter range can result in nothing but eventual loss of deer and antelope populations. And loss of willow can result in loss of moose.

As one big game biologist told me, he doesn't have research to document the direct loss of big game animals. But he doesn't have as many animals as he had a few years ago.

And in regard to your statement about animals killed, I would have to point out that game management is far more intensive now than it was only a few years ago. Not only that but biologists have pointed out to me that they fear there has been serious inroads into basic herds. Some of it was intentional because the habitat was gone (clearcutting, spraying, fencing, highways?) and they felt it was better to harvest than to let the animals die.

I respect your position, Bill, and know it's a tough one. But I feel we have made progress in environmental matters only by holding your feet to the fire. And this is the Forest Service collectively, not just you.

I agree, I sometimes use the broad-axe where a wood chisel might be better. I will try to improve upon my own performance.

Tom Bell  
Editor

## Wilderness . . .

wilderness hearings for Yellowstone will be held at 2:00 p.m. on each of these dates and locations.

Volz said that those wishing to participate in the master plan meetings or wilderness hearings should notify the appropriate superintendent at least two days before the first public meeting scheduled for that area.

Written comments for insertion on the record of the meeting or hearing will be accepted up to 15 days after the last master plan meeting or 30 days after the last wilderness hearing to which they pertain.

Inquiries and comments should be addressed as indicated:

For Grand Teton National Park: Superintendent, Grand Teton National Park, P. O. Box 67, Moose, Wyoming 83012.

For Yellowstone National Park: Superintendent, Yellowstone National Park, Yellowstone National Park, Wyoming 82190.

The wilderness and master plan proposals for Grand Teton will be available for public examination at park headquarters in Moose, Wyoming, and for Yellowstone at park headquarters in Mammoth, Wyoming.

The proposals are also available for examination at the Midwest Regional Office, National Park Service, 1709 Jackson Street, Omaha, Nebraska, and in Room 1013, Department of the Interior Building, 18th and C Streets, N. W., Washington, D. C.

Enclosed is \$10.00. Please send

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ROMCOE AWARDS NOMINATION FORM — 1971

To make a nomination, please send this form with attachments to ROMCOE, 4260 East Evans Avenue, Denver, Colorado 80222, on or before February 1.

Attachments should include activity description plus any other supporting materials which would help the Awards Committee judge the merits of your nomination (such as newspaper clippings, testimonials, reports, photographs). Please be complete, as this material will be the basis for judging.

Nominee (Individual or organization)

Name:  
Address:  
Occupation (for individual):

Nominated by

Name:  
Address:  
Telephone Number:  
Organization represented (if any):

\_\_\_\_\_  
(Signature) (Date)

1. Category of Award:  Industry  Government  Media  Education  Citizens
2. Environmental activity:  Action  Research  Education
3. Impact of activity:  Environmental Awareness  Environmental Protection  
 Environmental Improvement
4. Specify geographic area of impact (region, state, city, county or area):
5. Describe the significance or impact of the activity (i.e., improved land use, reduced air pollution, influence on industry, etc.):
6. Description of activity (please use additional pages as needed; this is the key item on which judging will center):

# Environmental Eavesdropper

LOONEY LIMERICKS

by Zane E. Cology

Statisticians now foresee

By the year 2050 A.D.

The human race

Will have outgrown it's space---

THEN where will everyone be?

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Environment was the major domestic issue of editorial concern, measured by 20,904 editorials over a 12-month period. The Public Issues Research Bureau said newspapers in 16 cities for the period October, 1970, to September, 1971, expressed more concern with water quality, land use policies, air quality and waste disposal than any other social issues. A spokesman for the Bureau said the editorials centered less on problems than on the failure to find solutions. The spokesman said there is "increasing scrutiny of adopted laws for weaknesses or loopholes, of government agencies for laxity and of industry for evasion."

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Scientists are taking another look at PCB's, the man-made plastics. An international group gathered under the auspices of the National Institute of Environmental Health Sciences considered implications to human health. An industrial accident in Japan seriously affected about 1,000 people in 1968. Liver damage, swelling and inflammation of eyelids and severe acne still troubles most of those affected and some have grown worse. Ongoing research shows PCB's are present in about half of the cadavers autopsied from 17 states and the District of Columbia, no matter what the cause of death.

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A study prepared for the Commission on Population Growth and the American Future indicates that if all anti-abortion laws were repealed, there would be little initial impact on birth rates. A spokesman for the Population Council said that removing abortion restrictions would not make abortion acceptable to those women who now oppose it, but would encourage women who will have illegal abortions anyhow to have safer, legal ones.

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Thousands of birds of various species are once more being sighted on Britain's Thames River. Waterfowl and wading birds which have been missing from the natural scene for generations are once more in evidence. The increase in wildlife is attributed to the efforts of the Port of London Authority to clean up water pollution. Heavy fines have cut down oil spillage and the Surrey Docks in London were closed.

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A Committee for the Preservation of the Economy of Cochise County, Arizona, has been formed to work for less stringent emission standards for air pollution emanating from smelters. Phelps Dodge Corp. has threatened to close its copper smelter at Douglas and the open pit mine at Bisbee if the laws are not delayed.

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The Texas Committee on Natural Resources says the voting records of 50 Texas legislators are so bad on environmental issues that the public deserves to have a choice. TCONR chairman Edward C. Fritz says, "The citizens should have a chance to vote for a pro-environmental candidate in every race. Close to a third of the House of Representatives should be challenged on natural resource issues." Cited are such issues as Clean Air Amendments, an Environmental Quality Act, a Land Use Inventory Act, a Land Use Management Act, and a bill to place a higher tax on dredged shell.



## ROMCOE Announces Awards

The Rocky Mountain Center on Environment at Denver has announced its 1971 Awards for Outstanding Environmental Achievement. Nominations for outstanding achievement in environmental matters will be accepted until February 1. Recipients of awards will be honored at a special occasion in Denver in March.

Nominations for outstanding environmentalists will be accepted from any of the Rocky Mountain States - Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming. Awards will be based on environmental achievement during 1971.

Honored will be those individuals or organizations who have done the most to promote environmental awareness; action; education; relevant research. Equal weight will be given for impact on the local, state or regional levels. Co-awards may be given. Awards in any particular category may be given only if there are worthy recipients.

The categories are: industry activity-individual or company; government activity-

individual or agency; communications media-individual or organization; education activity - individual or college, secondary school, primary school, or non-formal educational activity; citizens conservation activity - individual or group. The latter category carries a \$500 cash prize, as well as the plaques awarded to all winners.

The official nomination blank is reproduced above for the convenience of persons interested in making nominations.

## Cover Is Needed

LINCOLN, Nebr. - Blasts of cold winter weather the past week or so drove Nebraskans to the shelter of their warm winter homes. But, many of the state's wild citizens were literally "left out in the cold", searching in vain for a weed patch or woodlot to break the icy wind.

Unfortunately, this is not a problem that is new to Nebraska, according to the Game and Parks Commission. Every winter, Nebraska's wildlife population suffers in the cold and snow, and many birds and animals perish for lack of cover. And, come spring, the survivors are hard pressed to find cover where they can raise young.

A rapidly shrinking supply of cover is the most pressing problem for Nebraska's wild species. Everything from a small cottontail rabbit to a stately whitetail needs cover, but the woodlots and cover patches they depend on are being bulldozed, burned, or otherwise destroyed at an alarming rate.

While the need for cover is most apparent in winter, the time to do something about it was last fall. It was then that many of the weed patches and roadsides were burned and shelter belts and woodlots bulldozed.

Some of this clearing may have been desirable for more efficient farming or ranching operations, but much of it was done just to "tidy things up". This vendetta against woodlots, weed patches, and other "unproductive" acres often means little if any benefit for the farmer, but almost always spells doom for the wild creatures that once lived there.

While this assault on Nebraska's wildlife habitat is continuing, concerned Nebraska young people and landowners are teaming up to do something about the problem. Through the Game and Parks Commission's NEBRASKA-land Acres for Wildlife program, young "cover agnets" establish or maintain suitable habitat on plots of land provided by the landowners.

Material rewards for participation are few. The landowner gets a free subscription to NEBRASKA Land Magazine, and the cover agent is presented a shoulder patch or certificate. But, both get the satisfaction of helping Nebraska's wildlife.

## TU Is Undaunted

Trout Unlimited has not given up in its fight to stop construction of the controversial Lower Teton Dam in Idaho. TU and other conservation groups lost their first bid to stop the dam in U. S. District Court in Boise on Dec. 13.

A successful low bid of \$39.4 million to build the dam was awarded following the court decision.

U. S. District Judge Fred M. Taylor had ruled only on environmental impact of the dam and reservoir, and whether or not an impact statement on the project was complete enough to comply with the National Environmental Policy Act. Conservation groups say they will now press for a court hearing on the merits of the project. (See editorial, page 3.)

Meanwhile, Idaho Environmental Council President Gerald A. Jayne has written Russell E. Train, chairman of the Council on Environmental Quality. Jayne called for a release of the CEQ analysis of the environmental impact statement on the Teton Dam.

In his letter to Train, the IEC president said, "The Bureau of Reclamation's environmental impact statement clearly failed to meet the requirements of the National Environmental Policy Act of 1969; especially in the light of the interpretation of the NEPA requirements for Impact Statements made in the Calvert Cliffs Decision."

Jayne said Judge Taylor had "refused to consider any testimony on the calculation of the benefit-cost ratio for the project, and barred a witness from providing specific testimony of the Bureau's failure to comply with the NEPA in preparation of the environmental impact statement."





As people look from snowbound homes and dream of vacation days ahead, they possibly picture this sort of scene. Here, youthful campers at North Dakota's beautiful

Lake Sakakawea savor the last moments of another enchanting day.

## Nature's Lesson In Survival

by Thomas M. Baugh

Ever wonder what causes those beautiful colors in the bubbling hot pools of the Yellowstone country? If you're like most of us, you've made the assumption that the colors are mineral in origin. To a certain extent your assumption would be correct. Some of the color, especially the red so abundant in both the Norris Geyser Basin and in the area of the Mud Volcano, is caused by deposits of iron oxide. However, a majority of the startling color is organic rather than inorganic in nature.

What! Living organisms in those streaming caldrons? Yes! In fact quite a variety of living organisms, from the invisible to the visible, from the microscopic to the macroscopic.

Before discussing these unique lifeforms let's briefly consider some facts concerning the geysers and hot springs. The hydro-thermal activity of the Yellowstone area is extremely varied. Differences exist between even the two most similar looking springs and pools. It is these differences that lead to the unique nature of each of the multitude of pools and springs which dot the Yellowstone landscape.

When we think of water, we most often think of that tasteless substance which pours from our kitchen taps.

We tend to think of water as having a sameness. After all, water is water, isn't it? The answer to that question is no! Water, much the same as anything else in nature, differs. It is these differences, especially the variation in that scientific symbol pH, which determines the nature of variety of life in the hydro-thermal pools of Yellowstone.

For a moment let's consider the meaning of pH. pH is the symbol used by science to indicate the relative alkalinity or acidity of a substance. The pH symbol normally has a number attached to it. 'Pure water' is assigned the number 7. The numbers from 0 through 6 are assigned to those fluids which contain relative degrees of acidity. The numbers from 8 through 14 are assigned to fluids which contain relative degrees of alkalinity. It's obvious that the further you get from the magic number 7, the more acid or alkaline a fluid becomes.

A majority of the hot pools and springs in Yellowstone National Park are neutral or

alkaline in nature. However, acid pools do exist, such as Horseshoe Spring. This question of the pH of water is important because it has a direct bearing on the lifeforms which inhabit the thermal pools. In fact, the pH of the water is perhaps the major controlling factor influencing the life-types in the various pools. Certain organisms prefer alkaline water, while other types prefer water strong in acid content, still others prefer neutral water.

The important point to remember when you are viewing the pools and springs, is that each of the colorful lifeforms which inhabit them is highly and perfectly adapted to the conditions which surround it. Even more important is the fact that each type of microorganism is extremely dependent upon its highly specialized environment. Much like man himself, these tiny organisms would perish if those conditions ideal for survival were to be modified.

Water temperature is also a very important variable in determining the type of life which exists in the water of the thermal pools. Lifeforms have been found to exist in temperatures in excess of the boiling point of water. Existence under such harsh conditions attest to the amazing adaptability of life. It is obvious that the higher the temperature, the fewer the forms of life which will be able to adapt and exist.

Both basic plant and animal life inhabit the steaming pools, springs and streams of the Yellowstone country. Within the pools dwell bacteria, microscopic life which is capable of existing and even reproducing in boiling water. As the water escapes from the pools and springs, it flows down channels which become progressively cooler. These channels harbor both bacterial as well as algal or plant life. Scientists have found that the great profusion of bacterial and algal forms are affected by both temperature extremes. Maximum growth is reported to take place in temperatures around 130 degrees F. The higher or lower the temperature, the less the variety and quantity of these uniquely adapted living organisms.

The life of the thermal pools is not limited to those basically simple, but colorful organisms already mentioned. Small ephydrid flies survive in temperatures ranging from about 86 degrees to 109 degrees F. Here again adaptation has provided the ephydrid fly with a unique method

of existence. These small creatures are able to surround themselves with an insulating bubble of air which protects them from the hot water.

Basically we've discussed some of the representative life forms of the alkaline pools. The situation is much the same in the acid pools. The acid adapted bacteria often feed upon sugars and amino acids present in the pools. It is interesting to note that one unique bacterial group is reported to feed upon the chemical compound of hydrogen sulfide.

To many of us, one of the most attractive features of our wildlands are the wildflowers. The thermal basins, because of their generally warm environmental conditions, support a variety of land-based plant life. This plant life ranges from soft mosses to stately pines and includes the pleasingly golden monkey flower.

In their excellent, well illustrated, monograph "Life In The Geyser Basins", Thomas and Louise Brock point out that the steaming pools are a mixed blessing to the native wildlife of Yellowstone. The heat released by the hydrothermal activity provides warmth in an otherwise seasonally frigid environment. However, the thin crust which surrounds many of the pools acts, on occasion, as a trap, especially for the larger mammals.

By all means take advantage of the Brock's publication if you are touring Yellowstone National Park. For a minimal cost, you can add another dimension to your enjoyment and understanding of this fascinating natural phenomena. This small book has been available from the public information booths in the Park.

As we can see, all of nature's basic functions exist within or near the thermal pools. Life and death, growth and decay, all are present in what is certainly one of the most unique ecological settings in the world of nature.

There is a lesson here, beyond the uniqueness and beauty of the bubbling pools, a lesson in survival. The next time you visit Yellowstone National Park remember that much more exists than meets the eye. In those scalding waters live forms of life which have adapted throughout time to highly specialized conditions. Remember also, that man is a living creature who has adapted and that like the elemental bacteria of the thermal pools, man needs highly specialized conditions for his survival.