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High Country News

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Popo Agie To Be Considered

by Tom Bell

A wilderness hearing set for June 23 in Lander could set the stage for future wilderness consideration in Wyoming. The hearing on the Popo Agie Primitive Area could be an indicator of how much wilderness can be set aside for future generations.

The recent Wyoming Legislature passed a joint congressional memorial requesting no more wilderness for Wyoming. Although the memorial originated in the Senate, it barely squeaked through on a 16-14 vote.

Senate Majority Leader Don Jewett (R-Sublette-Teton-No. Lincoln), who introduced the bill, said "I think we now have wilderness areas up to our necks." The world-famed Bridger Wilderness is in Mr. Jewett's district.

He was joined in support of the memorial in the House by fellow Republican lawmaker from Sublette County, Rep. C.R. O'Neil. The latter said, "If we continue to make more derness areas in Wyoming, we're liable to that proverbial voice crying in the derness."

Other lawmakers in support of the resolution said only a small percent of the population used wilderness areas. One representative said he thought Congress was unduly influenced by what he termed the "sleeping bag lobby."

About four percent of Wyoming's total land area outside of Grand Teton and Yellowstone National Parks is now designated as wilderness or primitive area. If the acreage being considered for wilderness in the two national parks is considered, then present wilderness or primitive areas comprise almost eight percent of the total land area.

The hearing on the Popo Agie Primitive Area will be the first public hearing held since the passage of the memorial. It is expected that opponents of wilderness will take full advantage of the joint memorial in trying to prohibit any additions to the existing primitive area.

The Popo Agie Primitive Area of some 71,320 acres was established by the Forest Service in 1932. It is located in the southern nd River Mountains on the Shoshone tional Forest. It is contiguous to the Wind iver Indian Reservation on the north and the Bridger Wilderness Area on the west.

The name, Popo Agie (pronounced po-po'sha, with long o's), is derived from the Crow Indian language, meaning "tall grass." The grass still grows in some spots along the Wind and Big Horn Rivers and their tributaries.

The area is known for its outstanding and rugged grandeur. The deep, glaciated canyons, towering peaks, and many alpine lakes in breathtaking settings are characteristic of the higher elevations. Wind River Peak is the highest mountain in the area at 13,225 feet. At the head of the North Fork of the Popo Agie River lies the Lonesome Lake Basin. Here, the famous artist, Alfred Bierstadt, painted "The Rocky Mountains," which hangs in the Metropolitan Museum of New York City and is considered one of the greatest landscape paintings in the world.

Most of the present primitive area, as the Forest Service points out, is "alpine or subalpine in character with elevations ranging from 9,000 to over 13,200 feet. . . The topography is very rough. . . The greater part of the area is bare granite rock — only shallow rocky soil is found and this only on more gentle ridges and stream bottoms where it supports a light grass cover." The Forest Service also says, "Recent timber surveys (in the study area, which includes undeveloped areas outside the primitive area) have determined that there is no commercial timber forest land suitable or available for inclusion in the Shoshone National Forest regulated allowable cut."

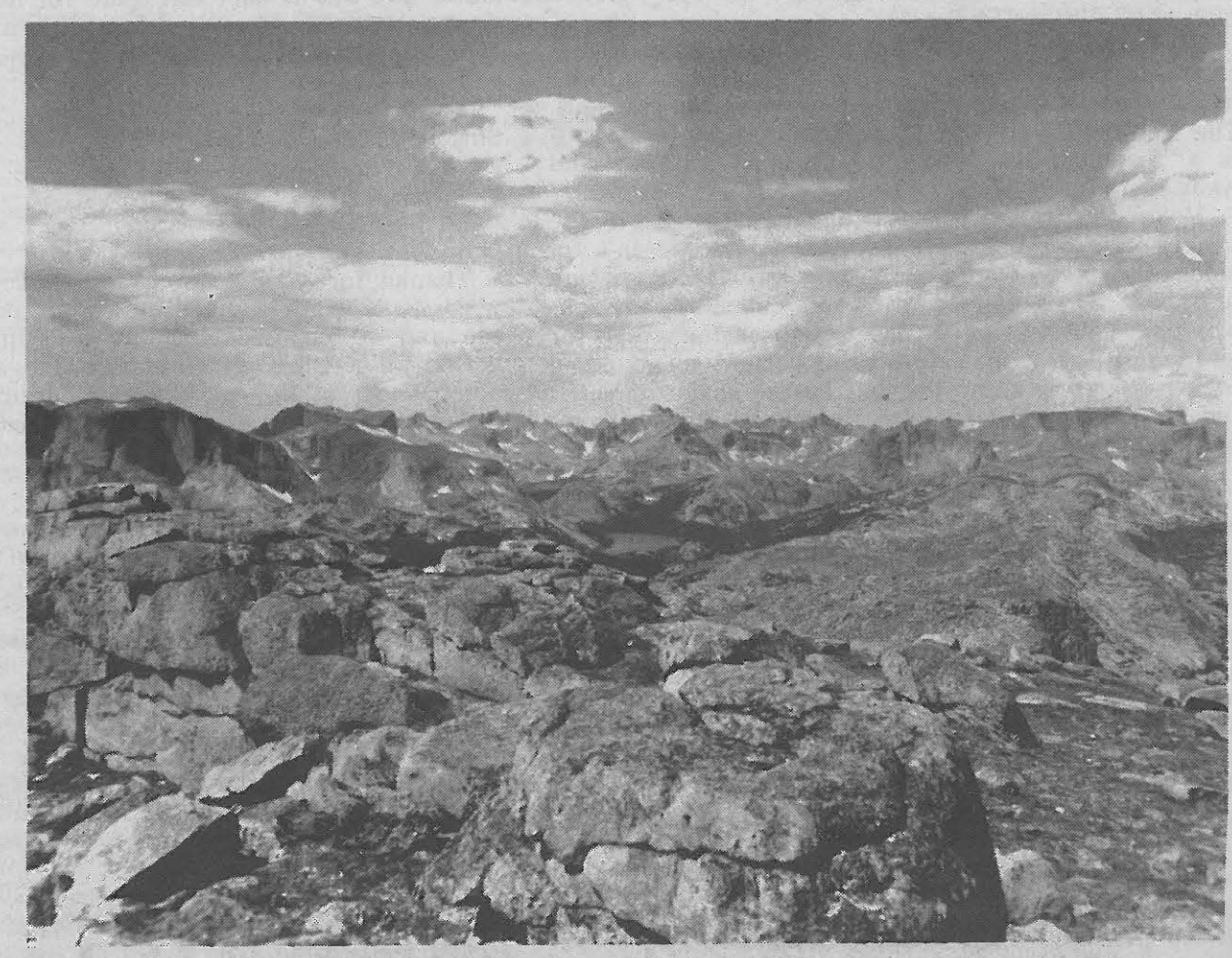
The Popo Agie Primitive Area and the contiguous undeveloped areas on the Shoshone National Forest comprise an important wildlife area. Bighorn sheep which once abounded in the area were all but eliminated by overgrazing and the diseases of domestic sheep. Reduction in numbers of domestic sheep and the re-introduction of bighorns has resulted in an important game herd. Elk and deer herds have also thrived under better management of both land and animals. Moose are common throughout the area. The black bear exists in some numbers and mountain lion are known.

Fishing ranges to the superlative in the lakes and streams. The rare California golden trout occurs in a number of alpine lakes and streams. Other species which occur are the Eastern brook, cutthroat, rainbow, brown, mackinaw and arctic grayling.

Some 7,000 sheep graze in the primitive area and adjacent national forest lands. About 800 cattle graze in contiguous areas along the eastern border. The Wilderness Act clearly provides that where grazing is an established use when a wilderness area is established, it shall continue as one of the multiple uses.

The Forest Service has proposed three alternatives for the primitive area. These are: to not recommend the existing area for inclusion in the Wilderness Preservation System; to recommend that the present primitive area be included in the system just as it is, and to recommend that the present area and some portion of the contiguous undeveloped lands be included in the system.

(Continued on page 4)



The Wind River Mountains of Wyoming contain some of the ruggedest and most awesome scenery in the Lower 48 states. This scene is from the high elevations of the Bears Ears Trail in the Popo Agie Primitive Area. In the very center of the photo is the southeast arm of Grave Lake. The shot is looking northwestward along the main mountain chain. Most of the present primitive area is this type of "wilderness on the rocks." Beautiful as it is, conservationists would like to see some areas of lower elevations included in proposals for wilderness.

HIGH COUNTRY

By Tom Bell

More and more people are becoming concerned about the politics being played with our national forests. At stake is not just more timber for more houses but the long-term damages to productive timber lands and watersheds. Thousands of acres of once-productive timber lands now lie idle because of mistakes in logging, and because the Nixon Administration has cut back on funds for proper management. At the same time, problems of water pollution and sedimentation of rivers and reservoirs is accelerated. The devastation of clearcutting continues on the important watersheds of the West.

Spurred by temporary shortages of lumber, increasing construction costs, and demands of the timber industry, the Nixon Administration ordered increased cutting on the national forests. It is a typical political ploy designed to make politicians look good in the eyes of the public while ignoring the long-range implications of sustained-yield and proper land management.

The Cost of Living Council ordered an immediate increase of 1.8 billion board feet of timber to be cut from the national forests. This amounts to an 18 percent increase this year with even higher increases promised to the timber industry for 1974 and 1975. At the same time, log exports to Japan were 2.8 billion board feet in 1972, compared to 1 billion in 1969. And yet exports continue to rise without any controls yet being imposed. There is a limitation of 350 million board feet a year which can be cut from national forests and exported.

It is interesting to note that Congressman Lloyd Meeds of Washington State polled his constituents on the matter of log exports. The export business is a big one in his district, both in the woods and on the docks. He found 82 percent of men responding and 86 percent of the women would favor a ban on exports except when we could show a surplus.

While all of this has been going on, the Nixon Administration has withheld $52 million in Forest Service appropriations. According to Bill Towell of The American Forestry Association, the 1974 fiscal budget has been cut $117 million below 1973. No new Forest Service employees are permitted above grade GS 9, while a $5 million pay increase had to be absorbed by the agency. The Forest Service must drop 600 full-time employees in 1974 to a total strength of 18,800 from a high of 22,600 in 1967.

All of this comes on top of pressures from escalating recreational use of national forests, and demands to do a better job because of increased environmental concerns. The Nader Report (Last Stand) pointed out that there is a "backlog of 4.8 million acres of clearcut land awaiting reforestation."

Moves to increase cuts for the special benefit of the timber industry might be condoned if it weren't for some other facts. The Forest Service estimates that there are about 25 million board feet of timber already sold and uncut. (Sold timber may remain on the stump for as long as five years before being cut.) It is a standing joke amongst some northwest foresters that companies bid timber in and let it stand until the price goes up and they can make a bigger profit.

Forest Service officials point out that timber sales require at least one year to prepare. Problems with road design and environmental considerations can stretch the time to seven years. Then once a sale has been made it may take up to three or four years before it is logged.

H. A. Roberts, executive vice president of Western Wood Products Association in Portland, Ore., said lumber prices reached a peak in mid-April, and that they were now leveling off. He also said sawmills could not meet the 1972 demand, but that with new housing starts at a lower level for 1973, the industry could meet the demand. The National Association of Home Builders said March housing starts had dropped by eight percent.

Still another great demand on our wood resources is being exerted by wastepaper shipping policies. The EPA has questioned the policies which favor wood chips over wastepaper. West Coast shippers charge $33.25 per ton for wastepaper versus $20 per ton for wood chips and pulp. The U.S. exports about 4 million tons of wood chips to Japan, compared to 90,000 tons of wastepaper.

In the meantime, the political question poses grave problems for the Forest Service. Chief John R. McGuire was told to produce the extra board feet or Secretary of Agriculture Butz would find someone who could. Other top Forest Service officials were told to support the Nixon Administration budget cuts or there would be unpleasant consequences.

All of this has serious consequences. Not only is the long-term productivity of the forests jeopardized but so are all the other multiple uses — including water, wildlife, recreation and wilderness. Those concerned should write their congressmen immediately. Even though the increased cut has been ordered, it has not been put into operation. There is still time to stop it.

Management or "mismanagement" of the national forests is coming more and more into question. Thousands of acres such as these in this large clearcut on Wyoming's Shoshone National Forest lie unproductive. And while they lie untended and non-producing, thousands of additional acres are being systematically stripped.

Letters To The Editor

Dear Tom:

Enclosed is my check to renew my subscription, sorry it is late. I wish I could send more, but this is all I can spare for now. I enjoy your paper very much and it has changed my way of thinking. I hope HCN will continue and grow.

Sincerely,
John Awve
Pinedale, Wyo.

Dear John,

Thanks for your renewal and your kind wish. It is gratifying to know that people can and do change their way of thinking. Before we get through the energy crisis and a number of other environmental problems facing us, most people are going to have to change.

The editor.

Mr. Tom Bell

200 Mile Territorial Limit Now! A Plea to Our Western Friends.

United States citizens must write to their respective congressmen and/or senators and request that a new 200 mile territorial limit be put into effect immediately. Portuguese, Japanese, Russian, and Canadian fishing vessels are "raping" our waters of a most valuable resource — fish. Foreign vessels have been taking millions of tons of fish from 12 to 20 miles off our shores and have been drastically reducing certain species. Local fishermen now can't support themselves which even brings an economic threat. The people of the eastern coast states need support from every American.

James Donofrio
New Milford, NJ

High Country . . .

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Guest Editorials

Reprinted from ALASKA EMPIRE, Juneau, May 8, 1973.

Some Alaskan Thoughts

For years we have echoed the frustrated cries of Alaskan developers caught in the legal maze of environmental conflicts.

Throughout the confrontations, the state's number one antagonist, the Sierra Club, has suffered insults and indignations, some richly deserved.

However as the events of pipeline and land power plays unfold before the general public, perhaps the Sierra Club, and their like organizations, have been misjudged.

Currently, Alaska is caught in a squeeze play between its desire to develop, and the pollution ridden conscience of the "lower-48" which provides ready examples of man's Lemming-like destruction of his own environment.

Because conservationists have stymied "progress," some industrialists and businessmen are frustrated to the unfortunate point of willing to sacrifice environment, wildlife, and land in order to further their immediate goals.

They have enveloped the general public with reams of material favoring each industrial project, and condemning the conservation organizations as reactionaries or misfits.

However the question which remains unexplored is, "is industrial development really the Alaskan future, or is it the end of the Great Land as we presently know it?"

While these statements may seem like heresy to many, they require close scrutiny.

Certainly we have an energy crisis, a timber shortage, and attempts by many to determine future land use by preservation, but perhaps these complex problems have solutions other than the immediate degradation of the environment. Increased emphasis on tourism as an example.

If there is a lesson in the Watergate scandal, it is the public's blind acceptance, through apathy, of biased facts and events spoon fed by self-interest motivated politicians and businessmen.

Are the pipeline and 80 million acre withdrawals such issues? Is the pipeline really safe?

We wonder

Whether or not our state and national leaders have the political inclination or fortitude to logically debate the future of Alaska is questionable. Obviously the Sierra Club has forced this confrontation, perhaps for the best.

As we view the mistakes of the "lower-48" and the slow encroachment of the bulldozer on virgin Alaskan land, we question whether the state is engulfed in well designed development hysteria, or sincerely attempting to perpetuate Alaska for future generations.

Unfortunately, time will tell.

Reprinted from the IDAHO STATESMAN, Boise, May 30, 1973.

Not An Unlimited Resource

"The problem facing the Northwest, though, is that we are cutting far less than we are growing. . ." — Idaho Congressman Steve Symms, in a newsletter from Washington.

"We are not managing our public lands wisely, and we are depleting our timber. . . The U.S. Forest Service is not an alarmist group. Yet their latest timber survey predicts that the annual timber harvest on private lands on the Pacific Coast will decline from 10.5 billion board feet in 1970 to 4.4 billion in 2000. All land ownerships on the Pacific Coast are being overcut, and by the year 2000 timber demand may exceed supply by 20 million board feet." — Washington Congressman Lloyd Meeds, in a newsletter from Washington.

How is it that Congressman Symms is telling his constituents that not enough timber is being cut in the Northwest, while another Congressman is saying just the opposite?

Congressman Meeds contends that timber exports to Japan — which were running at an annual rate of more than 4 billion board feet in March — are seriously depleting Northwest timber supplies.

In essence, he says, the exports are robbing the region of timber it will need in the future.

Congressman Symms is eager to cut more timber, but he has indicated no serious concern about log exports.

The Forest Service has reduced "allowable cuts" on Idaho forests in recent years — basically because it recognized that past allowable cuts were excessive. We have been overcutting the forests.

These more recent allowable cuts are more realistic, more in line with the amount of timber that is actually grown each year, and available for harvest.

A few weeks ago Symms was trumpeting about "mismanagement" of the forests. He has tempered his comments in more recent statements. Yet his assumption that in the Northwest "we are cutting far less than we are growing" is of doubtful validity, to say the least.

Exports to Japan have been running at a rate far in excess of the total timber cut annually in Idaho. Timber is a renewable resource, but not an unlimited resource.

Reprinted from the CASPER STAR-TRIBUNE, Wyoming, April 28, 1973.

A Taste of Things To Come

Considered in logical terms, the National Park Service's computerized system for camping reservations at the most popular parks makes sense.

As a foretaste of things to come, this innovation has disturbing overtones, however.

The Park Service plan is an experimental effort to assure a camping spot for family-sized groups for which reservation has duly been made. The old first-come, first-served camping system will be abolished at six parks — as yet unannounced, but presumably the most popular ones; Yellowstone, Yosemite, Grand Teton, Grand Canyon, Sequoia and Glacier.

This will make camping a bit less free and easy than in former times. But at least families signing up in advance will be able to expect that at journey's end a camp site will be awaiting them.

What, then, might be those "disturbing overtones?" Think of computerized camping reservations as but one step in a many-faceted process. It is the process of adjustment to the needs and desires of a population which, for all the current decline in the rate of increase, will be tens of millions greater a few years hence than at present.

This is no bugaboo wearing a papier mache 1984 mask. Nothing devilish is implied. What we suggest is that as the number of Americans pushes toward the 300-million mark (which, President Nixon warned as recently as 1970, might be reached by the year 2000) there will have to be increasingly tight regulation of goods and service — such "services," for example, as access to national parks.

There will be rising pressure on our social institutions, rising demand for finite resources. Where people go, what they may do, what they may consume, will be increasingly subject to efforts at regulation and control.

The Park Service camping reservation system, though perhaps good in itself, is a chilling hint of what the future may be like if population growth is not curbed.

Want Photos?

Bill Holcomb is an avid backpacker into Wyoming's Wind River Mountains. He is also a photographer of some skill (see pages 8 and 9). If you would be interested in good black and white photos of some of the beauty spots of the southern Wind Rivers, he may be contacted at 660 North 10th, Lander WY 82520.

Popo Agie To Be Considered

(Continued from page 1)

Of these three alternatives, the Forest Service has recommended the last — to include the present area and some adjacent lands. The Service has proposed three options: A wilderness unit of 81,345 acres containing the present Popo Agie Primitive Area (71,320 acres), and the addition of three adjacent areas totalling some 10,025 acres; a wilderness unit of 98,410 acres containing the present area, the three areas in option 1, and an additional area of 17,065 acres, and finally, a wilderness unit of 145,680 acres to include the present area and all undeveloped roadless areas adjacent to the present area.

The Regional Forester, in making his recommendation to the President, has chosen option 1, (81,345 acres).

Conservation groups have made their own field studies and have come up with their own recommendation. It includes all of the present area plus some 40,500 acres of contiguous lands. They feel that the opportunity now exists to extend the wilderness down into lower elevations and include a more diverse ecological cross-section. By including qualified undeveloped lands and by extending the wilderness boundary down the drainage of the Middle Fork of Popo Agie, the area would be more representative of a typical mountain ecosystem on the south end of the Wind River Mountains. This proposal includes much of the Forest Service recommendations of option 3, but without including all of the undeveloped lands adjoining the primitive area. The Forest Service estimates that there are 74,360 acres of undeveloped lands which adjoin the area. The conservation recommendation leaves out the areas which have become heavily used by snowmobilers.

Cattle grazing is an established use over much of the area being proposed by the conservationists. There are less than 1,000 animal unit months of grazing alloted for the entire area and about 117 of these are in non-use at the present time. One ownership has over half of the total. Overgrazing is not a problem, and the cattle are generally so dispersed that they present no conflicts with wilderness or recreational use.

On the other hand, conservationists point out that a persuasive argument could be made for including the adjacent areas in wilderness for the benefit of cattle owners. If the Middle Fork Valley should someday be opened to vehicular traffic, disturbance of grazing livestock would be far greater than from fishermen, hikers, backpackers and horsemen. There would also be less risk from cattle rustling.

The same argument could be made on behalf of game animals. More developments and any roads would certainly reduce habitat and affect populations.

The Forest Service is more than a little contradictory in its arguments to leave out of wilderness many of the same areas the conservationists want to include. The proposal for the wilderness area says that in these areas ". . . the scenery has a different characteristic. It is dominated by many captivating and challenging rock features, prominent drainages with steep canyons and waterfalls, with scattered swampy and open park areas, many small streams and extensive tree covered slopes. Wild flowers are abundant throughout spring, summer and fall, to provide a continuous variety of floral arrangements." But then the following sentence says, "The potential to enhance the enjoyment of this type of scenery is greatest in these two areas."

One might well ask how man could enhance that type of scenery by building roads, campgrounds, or other developments.

As to arguments of Wyoming people that wilderness areas are not used, they are simply not aware of the facts. It is interesting to go back to the early write-up of the Popo Agie Area by the Forest Service in the early 1930's. It was then that someone in the Service wrote, "The Popo Agie Wild Area has long been known for its beauty, its ruggedness, its lakes and streams, and its fishing. Prior to the construction of the Indian Service road into Dickinson Park in 1936, very little use was made of the area since only the most rugged, red-blooded persons would attempt the long horse-back ride from the valley back to the high country. Prior to 1936, probably not more than 50 people per year visited the area. After the road to Dickinson Park was completed in 1936, it became possible for visitors to drive their cars to that point and with an outfitter established at that point, the use of the area increased. In 1938, at least 150 people visited the area. . . Future use due to extensive advertising by the Lander Chamber of Commerce, increased facilities at Dickinson Park and the development of a trail system into the Reservation, will increase materially during the next four years. . . **The area is so large and so rough that there is little likelihood of its ever being crowded.** Since it forms a part of the large Wind River Wilderness (Bridger, Glacier and Indian area), an area equal in size to Yosemite National Park and can be used only by those visitors who are able and willing to make long, hard trips with pack outfit, the area should meet all demands for many years to come."

Not too many years have passed, but enough so to seriously consider if the present primitive area is adequate. In the light of what has happened in the intervening years, it does not seem so.

This is the valley of the Middle Fork of the Popo Agie River in the southern portion of the Shoshone National Forest. It is roadless and undeveloped. The main trail along the river is one of the primary entryways into the Popo Agie Primitive Area. It is of undeniable wilderness quality, and should be included for its diversity and difference in character from the high, alpine areas beyond. Option 1 of the Forest Service proposal recommends the inclusion of only the rugged terrain at upper right.

Statistics compiled by the U.S. Forest Service for 1969, 1970, 1971 show an incredible increase in use of not only the Popo Agie but the entire wilderness complex in the Wind River Mountains. The Bridger, the Popo Agie and the Glacier had a total of 225,795 visitor days of use in 1971. The Bridger Forest estimates it has an average annual increase of 17 percent in use of the wilderness only. The actual figures for visitor days of use in the Popo Agie Wilderness showed an average annual increase approaching 40 percent up to 1972. Visitor days of use went from 13,280 in 1969 to 21,760 in 1970 and to 34,670 in 1971. Visitor use for 1972 showed a decrease from 1971. The total was 29,730 visitor days.

A significant part of the increase in use of all three areas, but particularly the Popo Agie, can be attributed to the National Outdoor Leadership School. This nationally known organization is headquartered in Lander. Most of its various trips in this region either originate or terminate in Lander. Practically all of those make use of the Popo Agie Area. NOLS' use of the Popo Agie increased from 2,400 visitor days of use in 1969, to 7,560 in 1970, and to 19,320 in 1971.

Efforts to curb this growing pressure from NOLS' students has resulted in agreements which reduced numbers in 1972. Their part of the total visitor days of use in the Popo Agie Wilderness dropped from 19,320 in 1971 to only 10,844 in 1972.

Thus, it can be seen, in comparison of figures, that while NOLS' usage dropped by 8,276 visitor days in 1972, other wilderness

(Continued on page 7)

Reprinted from the IDAHO STATESMAN, Boise, April 29, 1973.

A Lot of Nonsense in the Forests

by Ken Robison
Editor, Editorial Page

A lot of nonsense is being distributed these days about reductions in allowable cuts on national forests — in Idaho and elsewhere.

One of the most nonsensical statements was issued earlier this month by Idaho Congressman Steve Symms.

Symms said the Forest Service cutting policy must be changed "before the nation's wood products industry is permanently crippled." He attacked reductions in allowable cuts on Idaho forests.

[illegible]is statement suggests that the cutbacks were wholly unjustified. Symms is either unaware of the reasons, or ignored them in his statement.

The basic reason was a realization that we have been overcutting the forests. Past allowable cuts were based on assumptions of a total forest land base that were unrealistic.

One of the reasons for reductions — overlooked entirely in the Symms statement — is protection of watersheds. Protection of watersheds from excessive erosion, with loss of soil and siltation of streams, is important. Idaho's high quality watersheds are among the state's greatest assets.

For the Forest Service to protect the watersheds is not "mismanagement" (that's what Symms said is going on), but good management. Instead of being bludgeoned with ill-informed statements, the Forest Service should be credited with doing a better job of managing.

The reductions resulted essentially from the Forest Service's own research, detailed studies of forest lands and their capabilities. They are not, as Symms and others have implied, simply the result of "environmentalist" pressures.

[illegible]hat has happened is explained in the booklet issued by the Intermountain Forest and Range Experiment Station, "Stratification of Forest Land for Timber Management Planning on the Western National Forest." The authors are J. H. Wilkstrom and S. Blair Hutchison.

They point out the problem of past overcutting — based on an inflated estimate of the timber growing base. Using the examples of six national forests, they show why it was inflated and how it was reduced to reflect a more realistic appraisal.

On the six forests (including the Boise National Forest in Idaho) former timber inventories indicated a base of 4.1 million acres. This was reduced by 22 per cent, to 3.2 million acres. (The authors point out that this does not mean the allowable cut was reduced by 22 per cent, because part of the land removed from the base is of low productivity.)

Of the 900,000 acres no longer classed as part of the timber growing base in the six forests:

— 20 per cent is land not capable of producing 20 cubic feet of wood per acre per year.

— 19 per cent is land too unstable to be logged without serious watershed damage, and other unsuitable forest soil.

— 7 per cent is patches of land too small or too isolated to be used for timber production.

— 35 per cent is land administratively withdrawn. This includes such withdrawals as timber along a stream that has high level of recreational use.

— 19 per cent is land under study for possible wilderness classification. (This amounts to 4 per cent of the land in the six forests.)

For example, on the Boise Forest, 134,469 acres were removed from the previous timber growing base. Included were 54,350 acres rated as unproductive, 25,579 acres rated as having unstable soils, 11,233 acres in isolated patches, 27,127 acres in the crest zone, 16,180 acres with land use conflicts, and 5,566 acres for which a decision has not been made. (This latter acreage includes lands

designated for possible wilderness classification — 5,566 acres out of a total of 456,865 acres in the Boise Forest.)

One symptom of past mismanagement is the near destruction of the salmon fishery on the South Fork of the Salmon River in Idaho. Too many roads were built, mostly for logging.

The tremendous erosion from road cuts and roads put so much silt into the South Fork that the gravel beds were filled, eliminating the fish habitat.

This area is part of the Idaho Batholith, 16,000 square miles of easily eroded granitic soil in central Idaho. Once disturbed these soils tend to wash away in something of the same manner as sugar.

Studies of the batholith show that a road increases the erosion by 220 times.

(The batholith takes in the Idaho and Salmon River Breaks primitive areas, which the timber industry wants to open to roads and logging. The lack of roads in those areas has helped preserve high quality watersheds, and the high quality streams in which salmon and steelhead spawn.)

If you don't want the side of certain slopes to wash away, you don't build roads on them. That may mean you don't cut timber, at least with present technology.

Ironically, now that the Forest Service has improved its management to a) protect the watersheds and b) prevent the depletion of future timber supplies because of overcutting, it is assailed by poorly informed critics for "mismanagement."

The mismanagement is what happened in the past, in such debacles as the South Fork of the Salmon. Abuse of the forest watersheds on the Payette drainage is one reason that Black Canyon Reservoir is today one-third filled with silt.

More timber could be cut on highly-erosive slopes — with long-term loss of soil, damage to watersheds, stream siltation and loss of fisheries.

The Symms statement is also deficient for:

— Failing to point out that the Forest Service had its budget request sliced nearly in half. It is being denied the money to do a good management job and provide the timber cutting which industry is pressing for.

— Failing to note that we are now exporting to Japan about twice as much timber as is being cut on Idaho forests annually. If there is a serious timber supply problem in the Northwest, why not curb those exports?

— While speaking of "waste" in timber that falls in unharvested areas, Symms said nothing about the waste involved in leaving substantial amounts of wood in the forest when timber is cut. The Forest Service says 18 per cent of the softwood is wasted.

What Symms suggests, essentially, is that the Forest Service should return to the cutting policies of the past.

That would mean abuse and destruction of watersheds. It would mean cutting more timber than can be replaced annually — cutting more than the "sustained yield" concept will allow.

More timber can probably be taken from lands which are available for cutting in the future — if they are managed properly today, and if the Forest Service is given more money for reseeding, thinning and other practices.

While certain timber companies make big profits exporting logs to Japan, the pressure is on to return to past policies, on the forests. A short-term increase in timber cuts might do only limited harm, but a long-term return to the practices of the past would damage the watersheds and overcut the forests.

Popo Agie . . .

visitors have continued to increase. That increase has gone from 10,880 in 1969 to 18,886 in 1972, almost 75 percent.

[illegible]Wyoming has several primitive and undeveloped areas yet to be considered. Each one of them shapes up to be a battle between those who look on wilderness as a "lock-up" and those who look upon the areas as a trust for the future. The hearing June 23 here in Lander could be a good barometer of how Wyoming people really do look at the diminishing resource of wilderness.

However, the resource does not belong exclusively to the people of Wyoming. The lands being considered are on a national forest, and therefore are a national resource. You can help determine the future of these important lands by writing a short letter to the Regional Forester, U.S. Forest Service, Building 85, Denver Federal Center, Denver, CO 80225. Your views should be in his hands no later than July 30, 1973.

Something will have gone out of us as a people if we ever let the remaining wilderness be destroyed; if we permit the last virgin forest to be turned into comic books and plastic cigarette cases; if we drive the few remaining members of the wild species into zoos or to extinction; if we pollute the last clean air and dirty the last clean stream, and push our paved roads through the last of the silence, so that never again will Americans be free in their own country from the noise, the exhausts, the stinks of human and automotive waste, and so that never again can we have the chance to see ourselves single, separate, vertical and individaul in the world, part of the environment of trees and rocks and soil, brother to the animals, part of the natural world and competent to belong to it.

Wallace Stegner

Devices Cost

Those new air pollution control devices on new cars are costing drivers more than just the price of the equipment. Already, since 1968 when the controls were first required, gas mileage has dropped an average of 20 percent, according to a report in the Boston **Real Paper** newspaper.

That means that the standard VW Beetle is now getting only about 23-miles to the gallon. And things are going to get even worse. By 1976 — the date that all cars will have to meet rigid and strict pollution control regulations — gas mileage may drop another 25 percent, reducing the VW to a mere 17 miles per gallon, and the average American family car to six or seven miles per gallon.

But the report notes that the Detroit automakers have come up with a solution for us — they'll build bigger gas tanks.::EARTH NEWS

Reprinted from the MOUNTAIN GAZETTE, Denver, May 1973.

Reviewing The Energy Crisis

This is the second part of a timely and relevant article on energy matters and their relationship to the West and the world.

The editor.

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Reviewed by Bill Rollins

A GLOBAL SOLAR DECADE

Tom Stonier, director of the Peace Studies Program at Manhattan College, in the May **Bulletin of the Atomic Scientists** last year proposed an "International Solar Energy Development Decade," similar to the International Geophysical Year of 1958-59.

Stonier wrote:

"Ecologist Frank Egler has pointed out that 90 percent of our environmental problems are political and economic — only 10 percent are ecological.

"This ratio is probably even higher when it comes to using solar energy for solving our power-generated pollution problems. The sun is one of the greatest potential sources of energy available to mankind. The benefits to be reaped from the extensive development of solar energy, for industrial and agricultural nations alike, are many: cheap power, increased industrial productivity, increased food production and decreased environmental deterioration.

"Furthermore, if properly planned and executed, solar energy could usher in an era of unprecedented international cooperation and global harmony."

POWER FOR PEACE

Stonier proposes that a program be set up under the United Nations to develop solar energy on an international scale.

He envisions a number of specific developments.

One is realization of the solar battery as a practical means of local power generation. This could be of great help in the developing nations such as India. S. Deb and M. K. Mukherjee estimated in 1969 that the cost of farm electrification could be cut in half by using solar batteries on each farm.

"Like the windmills," Stonier said, "each solar battery would foster a measure of independence and self-reliance that is so necessary for sustained national development."

Reliability of power availability would be increased too, Stonier predicts. At present there are many breakdowns in transmission facilities.

Government subsidies on the cost of electricity could be replaced by a secured loan for the capital outlay for the solar system on each farm.

Combinations of solar batteries on individual farms, coupled with a central generating plant for local industrial purposes would permit formation of agro-industrial complexes in many arid areas of the world.

For industrialized countries, Stonier sees a different problem. Possibly the solution would lie in a proposal made by Peter Glaser in 1968 — collecting the sun's energy in outer space converting it to microwave form to minimize propagation losses through the atmosphere, and then beaming it to receiving stations on earth.

Stonier believes that international cooperation on such a program would aid the cause of world peace in several ways:

1. Availability of cheap electrical energy would strengthen the economic base of developing nations and accelerate the rise in their living standards.

2. Development of solar energy sources would result in a natural and non-subsidized method of obtaining a more equitable distribution of the world's wealth. (For many underproductive nations solar energy is potentially a valuable export commodity.)

("One can envision large-scale transmission of energy from areas rich in sunshine to areas rich in industries: from northern Mexico and Southwestern United States to the industrial areas in the U.S. and Canada; from the Sahara to North Africa and Europe; from Afghanistan to the Soviet Union.")

3. As nations make the transition from agricultural to industrial economies the birth rate declines and growth approaches zero. The world population would tend to stabilize.

Stonier says that the cost of a country going it alone in the development of solar energy would be more than double. Competition in space with energy projects could lead to more paranoia, and of course pollution is a global matter.

Stonier believes two prerequisites must be met before such a program can be started: (1) the social climate must be favorable — a significant number of persons must be already concerned, and (2) a sound, objective, scientific analysis of the problem must be written to serve as a rallying point.

He believes the first prerequisite has already been met by the environmentalists, members of the peace movements, the aerospace industry and the governments of developing nations. Opposition is to be expected from the fossil fuel industry, atomic energy adherents and super nationalists.

Stonier is working on the second prerequisite — a high-visibility analysis and report. Then there must be public discussion and pressure on governments.

Unfortunately, while solar energy seems the best solution, it is getting the least attention at present.

PRIORITY TO POLLUTION

Oil companies say oil supplies will last only another 85 years, and gas reserves will be depleted in 15 years. Their response is increased exploration and exploitation of oil and gas fields; and experiments with oil shale, gas stimulation, and coal gasification.

There are potentially 1.8 trillion barrels of shale oil thought to be recoverable in the Rocky Mountain West, worth upwards of 5.4 trillion dollars. This shale oil is of hi the energy content than ordinary petroleum and every major oil company is investigating its future use.

POPCORN FOR POPEYE

Oil shale development, however, is potentially the most environmentally harmful of all. To get the oil from the rock by a heating method, the shale must be mined — most likely by strip mining. This would leave huge torn up areas and pollute local water supplies by tailings. Oil shale is like popcorn, in that after processing it takes up nearly twice as much space as before. It has been estimated that even if the mining pits were filled with the excess, there would still be 400,000 cubic yards left over each day.

Oil shale can be processed in a couple of other ways. One is similar to strip mining, except that the shale is mined in caverns. The third involves exploding underground nuclear bombs to simultaneously crack the shale and free the oil which can then be pumped like an ordinary oil well.

The dangers of nuclear stimulation inc e irradiation of the gas, seismic damage, now ruption of local residents, possible triggering of earthquakes and disturbance of the water table.

Coal gasification is another process, producing methane gas by heating and breaking down coal, then recombining it. It would mean cleaner conventional power plants, but would leave Wyoming and Montana, where there are vast coal fields, looking much like the ravaged terrain of West Virginia.

MANSFIELD'S MORATORIUM

Sen. Mike Mansfield, concerned about that possibility, told Congress, "I am not convinced that the nation's energy crisis is truly what the phrase indicates. . . Information available

Oil industry figures indicate world petroleum supplies may last 85 years, and natural gas reserves 15 years. The figures are questioned by others. But regardless of the terminal points, the fossil fuels are not without end. Long before they are finally depleted the world must look to other energy sources.

indicates that the current situation might be due in part to mismanagement of our oil supplies and overuse of gasoline and too scant attention being given to the conservation of energy. . .

". . . I do not want to see consumers in my state saddled with higher utility bills to finance the corporation's expanded activity.

"My most immediate reaction to the current debate over coal development is to support a complete moratorium on all coal development until such time as we can come up with a more reasonable and orderly plan."

Sen. Mansfield wants Montana to (1) repeal the eminent domain law which permits large corporations holding sub-surface rights to condemn surface ownership; (2) regulate power plant placement and adopt a severance tax to finance regulation and enforcement of reclamation laws; (3) provide for restoration of all surface mine lands to a condition equal to or better than at the start of mining, and (4) permit outright bans on strip mining in areas considered to be fragile and inappropriate for restoration and reclamation.

Any use of fossil fuels results in air, water, thermal and land pollution.

RAPE AT FOUR CORNERS

The Four Corners plant, near the juncture of Colorado, Utah, Arizona, and New Mexico is the best (or worst) example.

There will eventually be six huge power plants on or near the Hopi and Navajo Reservations supplying about 12,000 megawatts of power.

The demand for this power comes not from the immediate, sparsely populated area, but from Los Angeles, Las Vegas, Albuquerque — some of which face power shortages from local air pollution controls.

The smoke plume from the Four Corners Plant stretches for more than 50 miles. Strip mines are being dug and wells drilled to supply the plants with coal and water. The desert ecosystem is very fragile and limited in its ability to recover.

HYDROELECTRIC POWER

Hydroelectric power is the best-developed of the other alternatives. Water running downhill is used to turn a water wheel, irrigate, or spin a turbine to run a generator. It's clean, inexpensive after initial costs and doesn't use non-renewable resources.

There are problems however. Dams must be built and large amounts of fast-flowing water are required. Perhaps 35 percent of the world's potential has already been tapped.

HARNESSING THE TIDES

Tidal power would also involve building dams and is limited by geography, besides destroying natural beauty of coastal areas and marine habitat.

BLOWING IN THE WIND

Windmills have been in use for years. They are economical and technically feasible, but again limited by the inconsistencies of the wind and geography.

William Heronemus, a professor of engineering at the University of Massachusetts, has proposed a network of electricity-producing wind generators on the oceanic continental shelf of the northeastern U.S. He contends that they would produce electricity in 1990 in New England for 2.51 cents a kilowatt hour, compared to 2.72 cents for nuclear or fossil-powered plants.

SEA-THERMAL PLANTS

Engineer James Anderson of York, Pa. claims that plants operating on the temperature differences between deep, cold ocean water and surface, hot ocean water could produce heat to drive electrical turbines.

Wind power, which has long been tapped as a ready source of clean, cheap energy, now may be coming back into its own. This lonely windmill sits in Wyoming's Powder River Basin where billions of tons of coal may soon be exploited. Unlike the relatively harmless use of wind, the coal will require strip mining and lead to massive air pollution problems.

He says such plants could produce electricity cheaper than any other known power plants. They would be located along the Gulf Stream in the Atlantic.

GEOTHERMAL POWER

In this environmentally acceptable technology, the earth's heat is brought to the surface to drive an electrical turbine or supply heat for other purposes. There are enormous reservoirs in the Southwest.

A geothermal plant has been operating in Italy since 1904, and Reykjavik, capital of Iceland, is heated this way.

The only requirement for tapping geothermal power is that a "magma pocket" be near the earth's surface. A proposed joint U.S.-Mexican geothermal complex in Southern California is being studied.

Experts estimate that up to 200,000 megawatts of potential electricity can be converted from geothermal heat deposits in the U.S. This is equal to more than 200 new 1,000-megawatt electrical power plants.

ATOMIC ENERGY

Atomic power plants have the main advantage over fossil fuel plants that they use less fuel. There is no strip-mining, no air pollution from burning fuel and few by-products to get rid of. Fission, however, only provides 1 percent of electrical energy at present.

The radiation hazard is the main problem. The fission plants have a long history of spills, leaks and accidents. Thermal pollution has been a big problem. Water used to cool the plants has been dumped back into streams, heating them beyond naturally acceptable limits, disrupting the aquatic ecosystem.

Domestic reserves of uranium are expected to last only about 30 years, so priority has been given to "fast breeder" reactors. Higher temperatures and more radioactive materials are needed — therefore there are still more hazards.

RANSOM WORTH PAYING

John W. Gofman, professor of medical physics at the University of California and former head of the Biomedical Division at the Lawrence Radiation Laboratory, has proposed an adversary method of controlling ecologically unsound or dangerous technical innovations.

In an article in the **Bulletin of the Atomic Scientists** in September of 1971, he suggested development of "a sustaining body of technological criticism and challenge" as "incumbent on the scientific community."

Speaking about nuclear electrical power, he said, "It is . . . difficult to believe that the cost of conversion can possibly approach the cost of continuation with potentially disastrous enterprises.

"The industrial giants are not going to disappear in any event. It is sensible to have them doing something that meets societal needs rather than something which thwarts human survival. If this be ransom, I would consider it well worth paying."

Solar Heat Your Home

Those interested in solar heated homes can now obtain plans for the Solaris system developed by Dr. Harry E. Thomason. Thomason is a physicist who built his first solar heated home in Washington, D.C. in 1959.

According to **Popular Mechanics** (The house that has its furnace in the sky, by Omer Henry, June 1973), the Solaris system is so promising that the Federal Housing Administration has already approved the basic design. That means you could get a government-insured mortgage loan to build a house from the system design.

The **Popular Mechanics** article says installation costs run around $2,000 to $2,500, or about double those of conventional heating systems. But winter fuel bills are negligible beside normal heating bills in most climates.

A booklet and plans for the Solaris system can be obtained from Edmund Scientific Co., 101 East Gloucester Pike, Barrington, N.J. 08007, for $10. The plans call for standard building materials throughout.

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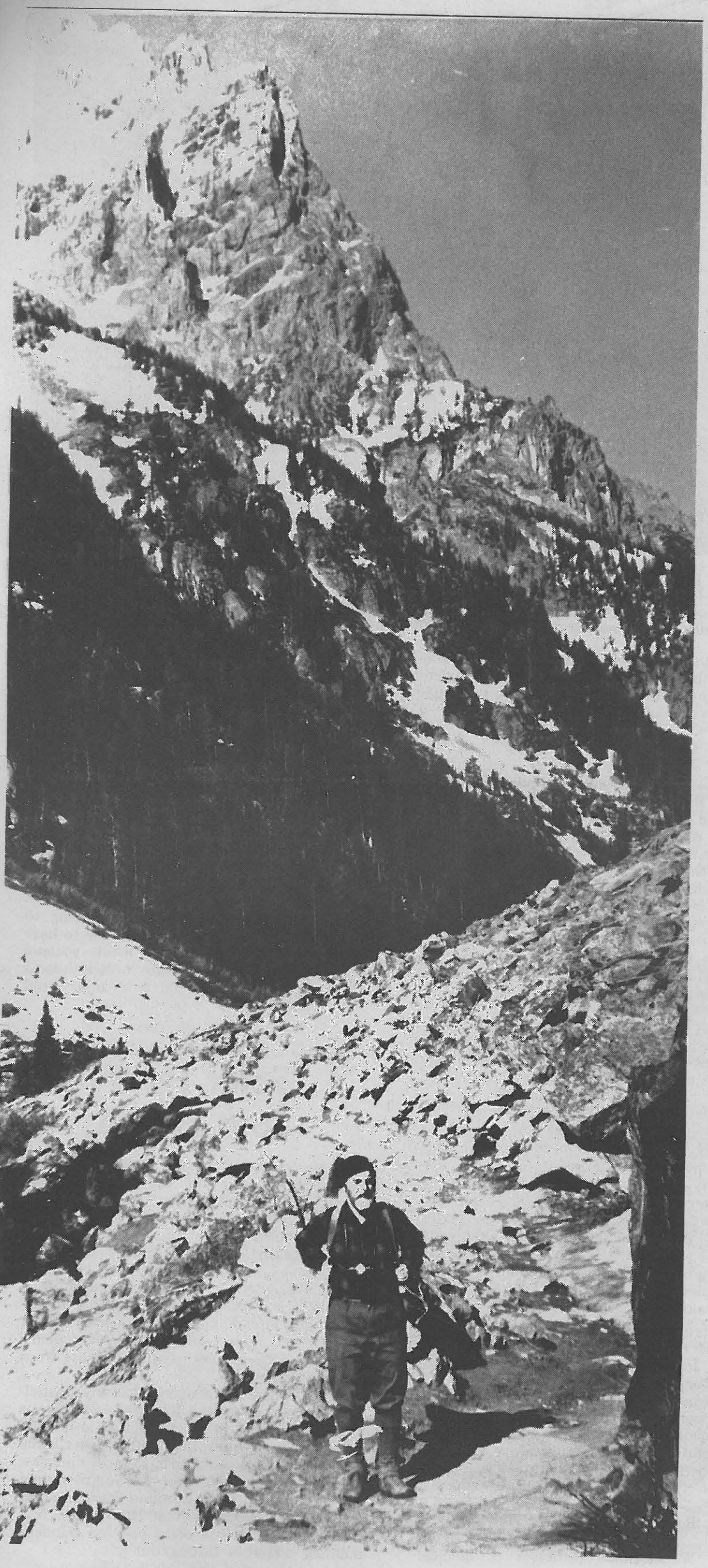

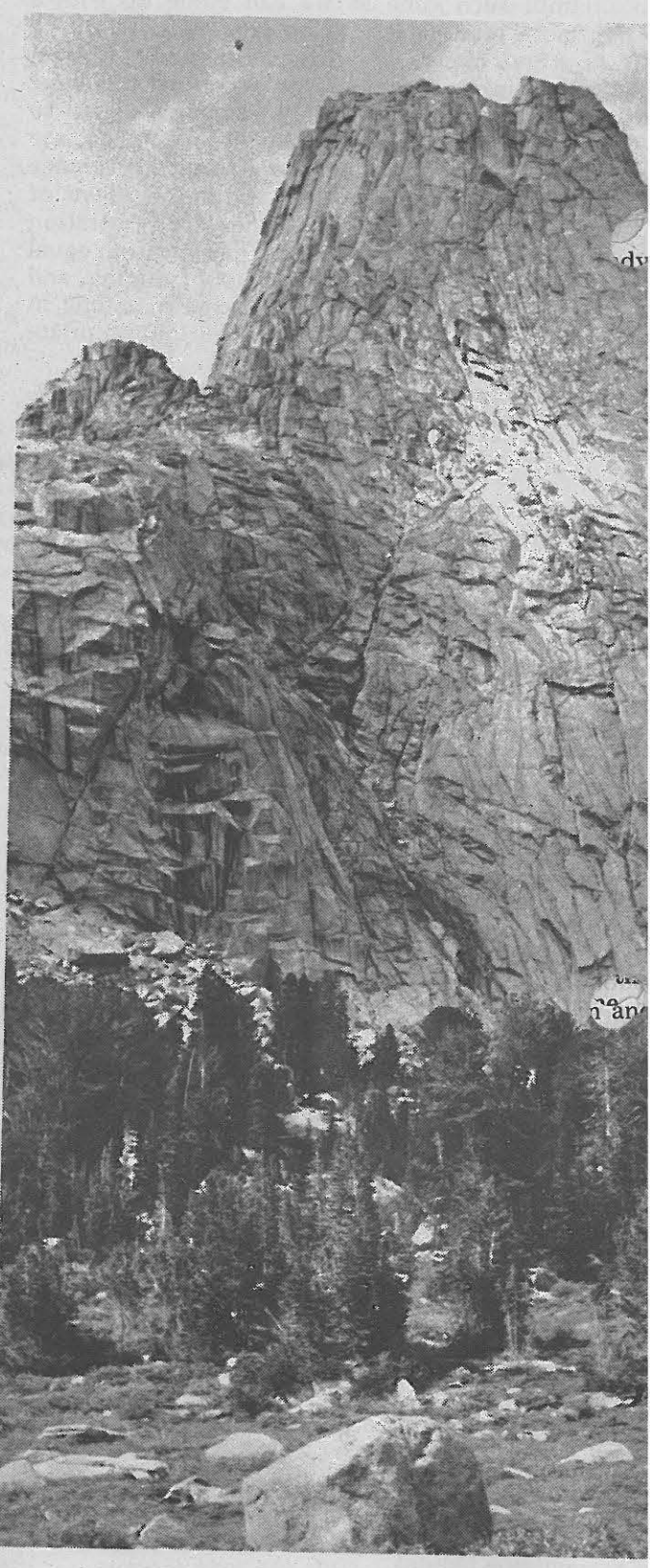

Wyoming's Popo Agie Primitive Area has a euphonic
the towering peaks and sheer cliffs found therein. Here,
Rivers, Roy Kerswill, crosses from the Bridger Wil
the Lonesome Lake Basin, he surveys (at right) Pingora,
two peaks and the Cirque of the Towers (upper right)
technical climbs in the Wind Rivers.

The Popo Agie, the neighboring Glacier Primitive A
Wilderness Area on the west have some of the ruggedes
The Popo Agie has some 169 miles of developed trails
horseback riders.

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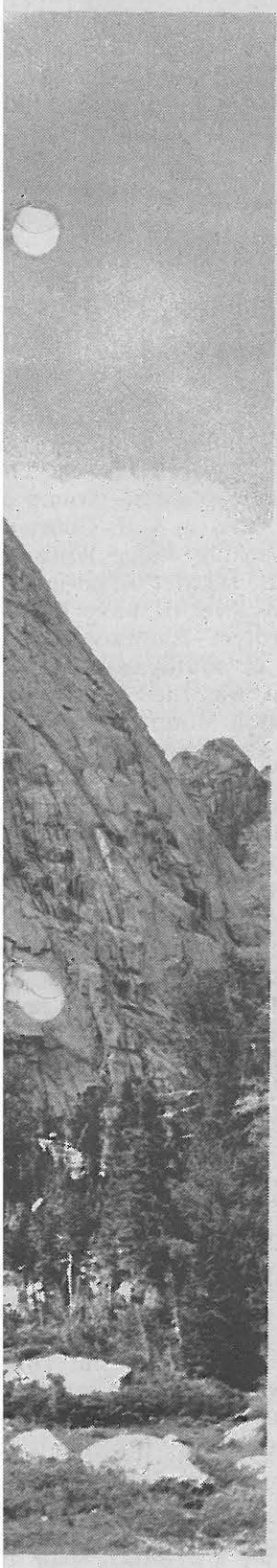

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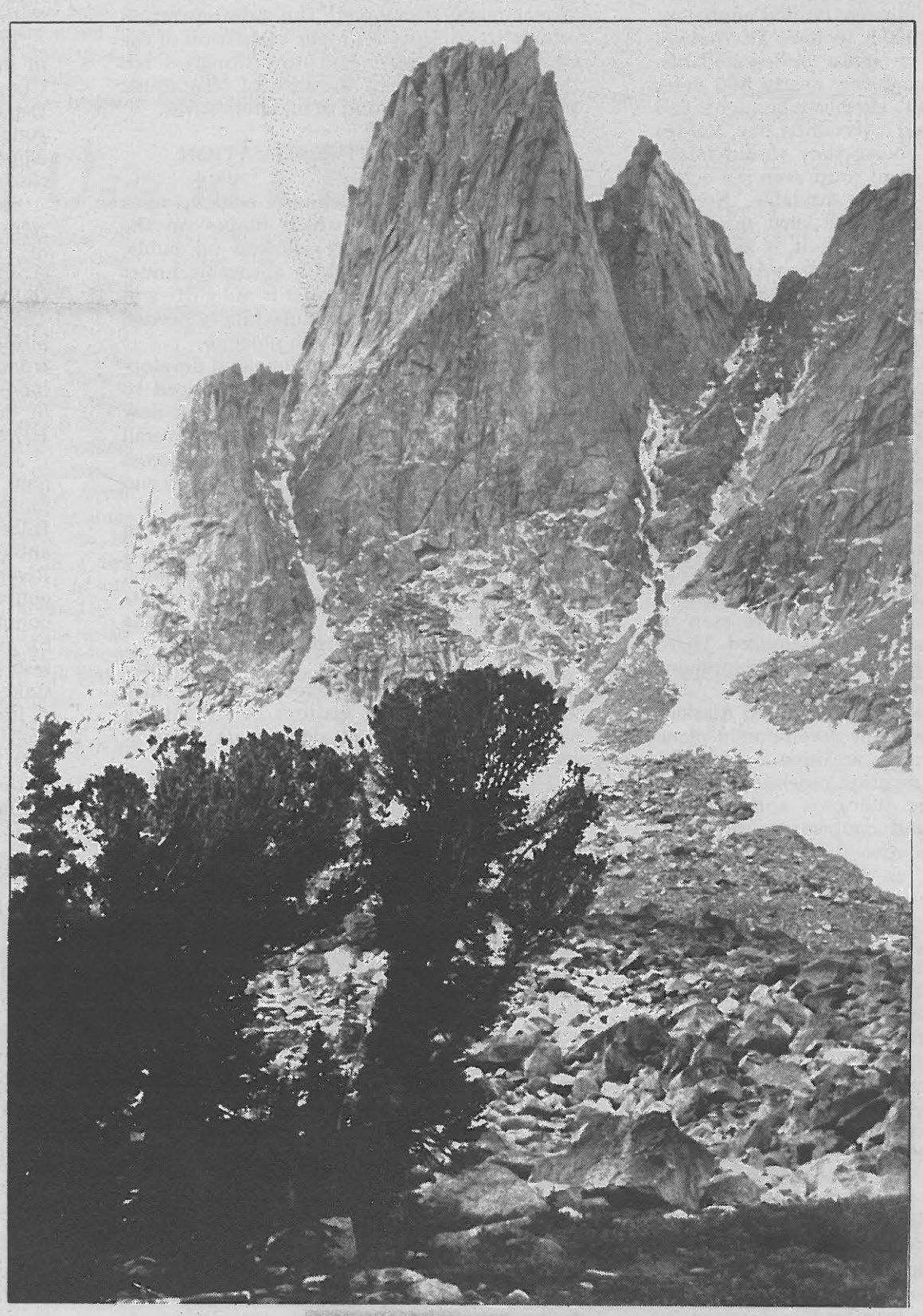

Photos by William Holcomb

Congress to Act on Pipeline

by Bruce Hamilton

When the courts blocked the construction of the trans-Alaska Pipeline (TAPS) they gave Congress the opportunity and responsibility to obtain an environmentally sound answer to the Alaskan oil development question. The courts gave Congress a chance to examine in depth both the trans-Alaska plan and the alternatives such as an Alaska-Canada corridor. If Congress acts only on the right-of-way issue and does not take full advantage of this opportunity to deal directly with the routing issue, it is abdicating its power and betraying the public trust.

PIECEMEAL PLANNING

The Executive Branch has confined its interest to the narrow view of the group of oil companies sponsoring the trans-Alaska plan. Because the oil companies had focused only on the oil resources and a trans-Alaska route, the Interior Department has restricted its focus to follow suit. Sec. of the Interior Rogers C.B. Morton has repeatedly expressed his department's approach, "the scope of our work here is to deal with applications on our desk."

Stewart M. Brandborg, Executive Director of the Wilderness Society, outlined his perception of the oil companies limited approach: "They have not wished to have alternatives considered. This is quite understandable. Having ordered prematurely nearly 800 miles of pipe (from Japan, curiously enough), and having had it shipped to Prudhoe Bay, Valdez and Fairbanks, of course they would rather not move it to a different route even if a better route now appears to be available. Nor do they want to admit making what may have been a serious blunder. But it is becoming increasingly obvious that the trans-Alaska plan may be just that."

The shortcomings of this narrow view by the Executive Branch were pointed out by Lieutenant General William F. Cassidy, then Chief of the Corps of Engineers and Executive Secretary of the Corps' Environmental Quality Council as early as July 7, 1969. Cassidy wrote: "The development of Alaska is proceeding on a resource by resource, an agency by agency or an industry by industry basis with an apparent lack of regard for the total Alaskan development or possible large-scale environmental consequences of such development. . . . The government is in imminent danger of losing its opportunity to step in and provide the total planning required. There is a real danger that actual private development will preempt government efforts."

This lack of total planning has led Alaskan and Canadian North Slope development plans to an absurd end — we are now confronted with plans for two separate pipeline systems! Instead of weighing the pros and cons of alternative routes and cooperating with the Canadians, the Executive Branch has let the oil oligopoly lead us to this unjustifiable position.

It may have been justifiable to prefer the shorter trans-Alaska route to the Canadian route when the Canadians were expressing little or no interest in a Canadian corridor. But now that the Canadians seem bound and determined to transport their oil and gas resources from the same general area, and handle the gas from the Prudhoe Bay fields as well, the trans-Alaskan route should be reevaluated to avoid unnecessary duplication and excess environmental disruption.

Not so says Sec. Morton. In an article entitled "Why the Alaska Pipeline Needs to be Built" Morton wrote, "I hope I do not sound hostile or even indifferent to Canada. I would like to see a natural gas line built through Canada to our Midwest as soon as possible. I hope that increased exploration in Northern Alaska and Canada discovers enough oil to justify a second oil line — one that would run through Canada to our Midwest."

Such a duplication would disregard the excellent principle of common corridors. Whenever possible pipelines and similar structures requiring rights-of-way should be located in utility corridors to minimize environmental disruption. It also ignores the results of an economic study made for the Interior Department that recommended if two oil pipelines prove to be needed, both should go in a common corridor across Canada.

Interior has defaulted its duty by not raising many pertinent questions regarding the Canadian common corridor alternative. In the words of John Dienelt, staff counsel for the Environmental Defense Fund, "The Administration and other supporters of the Trans-Alaska Pipeline ironically attempt to rely upon alleged uncertainties regarding the Canadian government's position and lack of information regarding feasibility of oil and gas pipelines through Canada in asserting that TAPS is the only realistic means of transporting North Slope oil."

These alleged uncertainties can be resolved. Perhaps all that is necessary is to ask the Canadian government and the industries who have investigated possible Canadian oil and gas pipelines for the studies and data they have already developed. The Administration refuses to consider a proper evaluation of the Canadian alternative and now Congress has the option to accept the task of responsible study and consideration of all alternatives.

THE LEGISLATIVE SITUATION

The trans-Alaska pipeline is held up by a permanent injunction which hinges on the width of a right-of-way allowed on public lands. The maximum width allowable under the 1920 Mineral Leasing Act is not sufficient to accommodate the heavy machinery needed to lay and service the 48 inch pipeline.

In order to clear the way for rapid development a number of bills were introduced to remove this restriction. Of key interest now is Sen. Jackson's S. 1081 which sets overall policies for all kinds of rights-of-way across Federal lands. This bill passed committee and is awaiting Senate floor action.

S. 1081 gives virtually unlimited discretion to the Sec. of the Interior to grant any amount of public land he wishes for such rights-of-way. This would clear away the legal impediments under which the courts have enjoined the trans-Alaska pipeline permit.

If S. 1081 passes in its present form Congress will have surrendered its opportunity to review the critical features of the Alaska pipeline issue and will default its duty to review the Canadian alternative as well.

To rectify this situation Senators Mondale (D-Minn.) and Bayh (D-Ind.) will introduce an amendment to S. 1081 to reserve to Congress the decision on how to transport North Slope oil. This decision would be made only after a final nine-month feasibility study of trans-Canadian alternative routes and negotiations with Canada.

Nineteen national citizens organizations have announced their support for the amendment. The groups, collectively known as the Alaska Public Interest Coalition, said the amendment "would provide the essential information on a trans-Canada route, enabling the Congress to make an informed decision in twelve months or less."

Jackson's S. 1081 contains provisions for a study of trans-Canada routes, but it simultaneously clears the way for Sec. Morton to license the trans-Alaska pipeline. In contrast, the Mondale-Bayh amendment prohibits issuance of any right-of-way permits from the North Slope during the several months the studies are under way. Upon completion of the studies, Congress would direct the Secretary which route, if either, should be licensed.

Action is needed now if we are to avoid having two Alaska pipelines. Write today to both your Senators (U.S. Senate, Washington, D.C. 20510). Inform them of your concern on the Alaska pipeline issue and ask them to support the Mondale-Bayh Amendment to S. 1081. Seek their commitment to this effort.

In the House action is slower. Similar bills will be introduced. If you write your Congressman ask him to support the Ruppe-Aspin bill, H.R. 7851. This bill has received strong support from environmentalists.

Rainbow Bridge Suit Grows

DENVER, May 23 — A coalition of 13 national environmental organizations has entered the Rainbow Bridge controversy. The groups joined in an amicus curiae (friend of the court) statement filed in U.S. Court of Appeals in Denver, backing Judge Willis W. Ritter's decision in U.S. District Court in Salt Lake City to limit the level of Lake Powell reservoir so as to protect Rainbow Bridge National Monument, in southeastern Utah.

The original lawsuit was filed by Friends of the Earth, the Wasatch Mountain Club (of Utah), and Utah river guide Ken Sleight. The Department of the Interior has appealed Judge Ritter's decision to the U.S. Court of Appeals, which heard oral arguments in the case on Thursday, May 24, in Denver.

Several of the groups backing the decision were also active in the Rainbow Bridge issue in 1955-56, when national conservation groups withdrew their opposition to the Colorado River Storage Project in Cor[illegible] an[illegible]. They did so in exchange for provisions prohibiting dams and reservoirs of the Project from being within any national park or monument. These provisions were the basis of Judge Ritter's decision on February 27, 1973.

June Viavant, Sierra Club spokesman in Salt Lake City, said: "The environmental movement is united in support of Judge Ritter's decision. Rainbow Bridge was guaranteed protection in 1956 by the Colorado River Storage Project Act. In backing the court decision, we're saying that the 1956 commitment must be enforced. The integrity of our entire National Park System against reservoirs and other destructive projects is at stake here."

Rainbow Bridge is a majestic sandstone arch in southeastern Utah, approximately 309 feet high and having a 278-foot span. It is the world's largest natural arch. President William Howard Taft established it as a national monument in 1910, including the surrounding 160 acres. The present threat is caused by the rising waters of Lake Powell, the reservoir behind Glen Canyon D[illegible], which was authorized by the 1956 law.

The organizations signing the amicus curiae statement are:

Sierra Club, American Whitewater Affiliation, Animal Protection Institute, Defenders of Wildlife, Environmental Defense Fund, Inc., Environmental Policy Center, The Fund for Animals, Inc., Izaak Walton League of America, National Audubon Society, National Parks and Conservation Association, National Wildlife Federation, Natural Resources Defense Council, and The Wilderness Society.

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Lake Powell entered Rainbow Bridge National Monument May 23, after environmentalists failed to get a stay on the order to keep water out of the monument.

Photo by Roger Clawson, Billings Gazette

The Northern Plains Resource Council has charged the Peabody Coal Co. with the first violation of Montana's new strip mining law. NPRC alleges that between May 5-11 Peabody conducted exploratory prospecting for coal in Rosebud County without the required state permit. Coal company officials and a representative of the state attorney general's office will meet this month to discuss the matter and to decide if legal action should be taken. The Montana law, called the toughest strip mining and reclamation act in the country's history, provides for state civil suits against violators. Civil penalties for violations of the law call for fines ranging from $100 to $1,000, with each day of illegal activity counting as a separate violation. The president of Peabody Coal Co. recently testified in congressional hearings that pending bills on strip mining were too tough and inflexible.

Land Use in Chaos

Sen. Gaylord Nelson says adoption of effective resource management policies — for land use, for energy supplies, and for other vital resources — is one of the most pressing issues facing the country today.

"As the land use chaos and the threatening energy crisis make absolutely clear," Nelson argues, "we have run out of supposed magic wands and easy answers. Our old frontier attitude that nature will provide an endless bounty is about as up to date as the dinosaur."

Nelson predicts that if giant private developers are allowed to go on subdividing huge chunks of scenic lands with little or no advance environmental planning, "in a few years, we will see the ruin of most of our most valuable remaining natural areas."

Under legislation which Nelson has introduced in the Senate, environmental reviews and permits would be required of all future large scale recreation home projects. The permit programs would be established and implemented at the state and local level in all fifty states.

The Senator points out that even with reduced population projections, "we will almost have to build what amounts to a second America to take care of our growth between now and the end of the century.

"Our tightening resource supplies and already damaged environment simply will not tolerate another era of prodigious waste and reckless, unplanned growth," Nelson warns.

He points out that the recreational areas of Wisconsin, particularly the northern part of the state, are in the grip of a vast change, brought on by a revolution in American leisure time, mobility and affluence.

"If we temporize with this issue of unplanned, uncontrolled ugly growth and exploitation," Nelson continued, "then the great heritage of this northland will be totally dissipated in a handful of years."

Comprehensive environmental review and planning of second home developments and protection of the state's wetlands are among the pressing land use issues cited by Nelson. He pointed out that already, Wisconsin has some 100,000 recreation homes. He added that in the last 10 years in the state, about 20 of the large scale leisure living development projects have been undertaken or proposed in rural areas.

Nelson points out that in the current nationwide recreation land boom, while some leisure living developments have been carefully planned, many have been conceived with little apparent concern for their potential environmental impact. As a result, he says, priceless scenic areas across the country are being ruined and spiralling demands for costly public services are being imposed on local governments by chaotic, reckless growth.

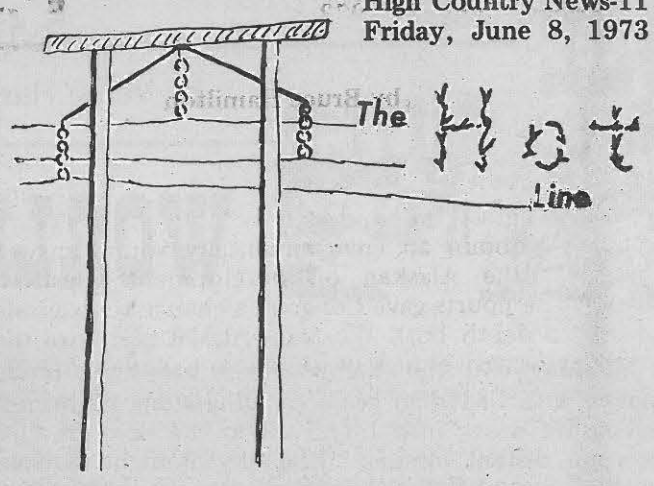
As other examples of the urgent need for more effective resource planning, allocation and conservation, Nelson cites the gasoline pinch now being felt in Wisconsin and other states, and the serious fuel oil shortage that threatened last winter.

In the energy area, Nelson has urged that the country immediately launch a crash effort to bring order and direction to our energy affairs, develop massive new, clean energy supplies, and cut energy waste.

As a step towards a new energy approach, the Senate recently passed a bill to create a Presidential Council on Energy Policy, a measure cosponsored by Nelson.

He says a $2.5 billion a year program of research and development should be launched to assure the country an adequate energy supply.

Just three tablespoons of plutonium-239, when burned, produces enough particles to cause nine billion lung cancers, according to scientists at the Lawrence Radiation Laboratory in Livermore, California. Plutonium-239 is the fuel used in the controversial fast-breeder reactor. : : EARTH NEWS



Montana's newly enacted Strip-Mining and Reclamation Act has been used as a basis for a model act for all states. A national conference on environmental legislation used as much as 80-90 percent of the Montana act in putting together a model State Surface-Mining, Conservation and Reclamation Act. Montana Land Commissioner Ted Schwinden says he believes this action verifies the fact that Montana now has the nation's best reclamation law.

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Idaho, which has no known geologic structures for oil and gas, has experienced a flurry of oil and gas lease applications. The Bureau of Land Management, which issues the leases, says there have been applications for about 2.5 million acres. Since June, 1972, there have been 774 applications.

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A scientist says that wind in the Western Plains carries enough energy to provide half the country's electrical power. The scientist, Frank Rom of the National Aeronautic and Space Administration, said that about 100 windmills could produce 1,000 megawatts of electricity. When the wind is not blowing, Rom says, power would have to be supplied by conventional means.

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Originally scheduled for last December, oil shale leasing on six tracts of government land in Colorado, Wyoming and Utah is awaiting completion of an expanded environmental impact statement. The final statement will be about 3,000 pages in six volumes and is expected to have expanded air, water and animal sections.

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Gov. John Love of Colorado named an eight-member Energy Task Force Executive Committee to study ways of conserving fuels, increasing energy supplies and coordinating public policy to deal with the growing energy shortage.

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In an Environmental Protection Agency study of sulphur dioxide air pollution levels in 32 cities, 19 cities showed a decrease in the period from 1964-71. Casper, Wyo. was the only western city included in the 19.

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Idaho's Snake River Plain may be tapped for future energy. Some 25 areas have been identified as potential geothermal energy sites, mostly in the Plain. One company has already filed for leases on 800,000 acres of potential lands.

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Wyoming Rep. Teno Roncalio has suggested that the state might join Reynolds Metals Co. in developing the proposed $2.3 billion uranium enrichment complex near Lake DeSmet. He said he had talked with Wyoming Gov. Stanley K. Hathaway on the matter.

THE WILD WORLD

by Verne Huser

Mid-May and the Yampa River was high, muddy, cool — with Canadian geese cackling along its brim-full banks. We drove into Lily Park in the light of sunset glow on distant clouds: "Red Sky at night; travelers' delight" — and that's the way it was for three glorious days of floating the Yampa to the Green, then the Green to Split Mountain. Nighthawks and bats flitted about between the cottonwood trees as we settled down for the night, the moon just rising — a gigantic orange ball. A cacaphonic symphony from the geese on the shore lulled us to sleep.

Up at dawn for a quick breakfast, then launch. Yellow warblers singing in the thickets and black-headed grosbeaks in the cottonwoods greet our passage. A muskrat — initially identified as a beaver — breaks the surface and heads for shore, away from the silver monster on which we float. As the canyon walls rise around us the assorted blackbirds along the shore give way to assorted swallows: cliff and violet-green the most prominent. And then we spot white-throated swifts that dominate the canyon scene throughout.

At Anderson's Hole we stop to look for fossils and to see the hermit's hovel. A lazuli bunting bursts into song. We see a winter-killed deer carcass picked clean by coyote and magpie and raven. Spotted sandpipers appear along the shore or flitting over the gray waters.

Then a stand of ponderosa pines marks the first real rapid, Tepee. It is a couple of big holes but at this water level we run just right of center and have no problems — just a fun ride through big waves. We stop for lunch and find wildflowers: larkspur, shooting stars, bright Indian paintbrush. And as we launch again a pair of golden eagles break loose from the canyon wall to drop, then sweep upward to climb and soar higher and higher into the clear blue sky where afternoon thunderheads are beginning to appear but never really threaten.

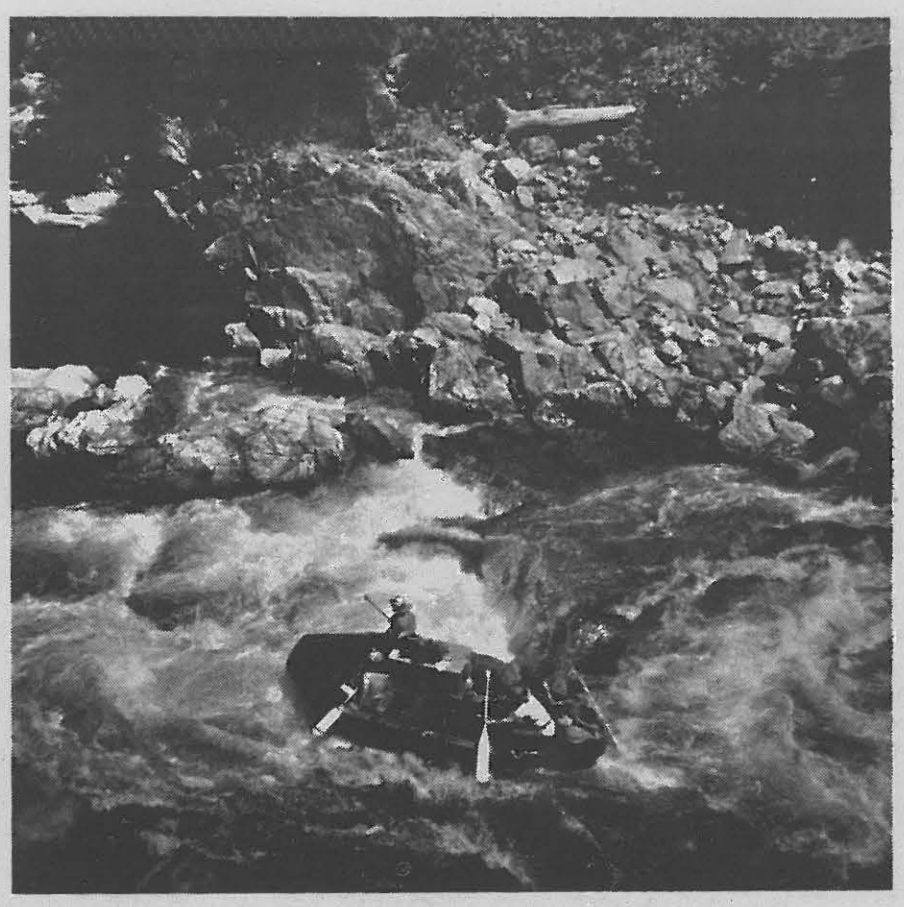
No one in our boat seems to know where Big Joe Rapid is, and we run it twice before we actually arrive at the real rapid. It's hot, and the drenching we get is welcomed relief. At Harding Hole we stop for the night, enjoying the shade of the overhanging cliff. We relax, repair a damaged boat, watch birds, build a fire for cooking and enjoy an elegant dinner of steak and baked potatoes and salad with champagne.

Birding before breakfast — and a bonus of three mule deer at the mouth of the canyon — brings Bullock's orioles, mourning doves, hummingbirds, mountain blue-birds, chickadees, canyon wrens, a western tanager. I bathe in the cold river using a famous peppermint-smelling biodegradable soap and feel squeeky clean in the early-morning chill.

Today we run the big one: Warm Springs, and all day we anticipate. We spend the morning floating, enjoying the canyon walls and the birds and the peace and quiet and the natural world. No one else is on the river. We stop for lunch, the traditional river sandwiches of peanutbutter and jelly, an assortment of cheeses and lunch meats, pickles and olives, chips and nuts. Then we move on to Warm Springs: a sheer cliff on the left with the width of the river cut in half by a huge alluvial fan of rocks from a side canyon pinching in on the right.

We stop for a look and find a party of kayakers and a support raft. The water churns, towers, dropping into huge holes, irregular and violent. We study the rapid, throw sticks to see how the water moves, where an entrance will take us when we are that stick. Cheat it on the right! The only sane way to go. We make a perfect run, but two of the boats hit the hole and there are some minor injuries that we don't know about until camp-time hours later, but we've had a thrilling ride.

On to the confluence, unimpressive from river level — we can hardly differentiate the Green from a backwater. Flat water prevails through Echo Park where the dam isn't, around the corner created by Steamboat Rock and into a dark-rock canyon like none we've seen yet. Perhaps the Green does make a difference — there is certainly more water now and some fierce whirlpools and backeddies. We land at Jones Hole for the night and find another party below the creek — we camp above. A quiet peaceful place perhaps over-used by too many overnight campers on float trips — and this is still early in the season.



Boatmen running the Pistol Creek Rapid in the Middle Fork of the Salmon River in the Idaho Primitive Area. Photo by Verne Huser

Dawn the final day on the river, waking to bird songs and the murmur of the creek. A lost gosling joins our camp, follows us onto the river, then returns to shore to find its family — not really imprinted. And before we know it, we are out of the canyon and floating along on flat water again. This time it is Island Park where half-a-dozen channels almost lead us lost, but we weave our way through the islands, many of them all but inundated at this water level. An hour, two hours drifting through Island Park watching seven other rafts fill with passengers from a bus — suddenly the river is crowded. We row downstream to get away from people.

We stop for lunch just above Split Mountain Gorge where the river drops an average of 20 feet to the mile for 6 or 7 miles. (We've averaged 12-feet-to-the-mile on the Yampa and 8-feet-to-the-mile on the Green, but there have been exciting sections like the 31-foot drop in the mile at Tepee — and we have the Moonshine mile ahead of us with a 39-foot drop.) We plot our run, launch and start the wildest ride of my life.

We'd broken the blade off one oar the day before. Now, one of the oars cracks at the oarlock. We replace it with our remaining spare, which snaps in two on the first pull. We are on the verge of the vortex with only one good oar. We splint the cracked oar with the blade-less oar and worry our way through missing rocks that could tip a boat, avoiding holes that might break a frame. (And we learn later that there had been a drowning here this very morning.)

We reach the landing, crowded and civilized. We've run 70 miles of river, 45 on the Yampa and 25 on the Green. For the most part it has been a wilderness experience, and we've reached places we could only reach by boat. We've seen only three other parties (only the last one — seven boatloads — really jarred) but lots of the wild world new to me.

We've experienced the wild world of Dinosaur National Monument, seen some of its wildlife, run some of its rapids, heard some of its sounds, and smelled some of its odors. We've experienced some of its moods and sensed the wonder of it all. Man is a part of the wild world, part of the nature of things. It is only man, if he is wise, who can assure the existence of the wild world. While only man seems to have the power and inclination to destroy, so only man has the option to preserve, can take the alternative to protect it.

An Environmental Game

(any number can play, and laugh through their tears)

devised by Lee Turpin

The game is simple. Each player in turn thinks of an individual or organization whose name appropriately fills the blank in the following sentence. The winner, and obviously the one who is the most environmentally aware, is the one who can come up with the most names that truly fit.

Here's the sentence:

"_____ seem(s) to be unaware of the long-term benefits of good planning and appear(s) willing to permit commercial and industrial vandalism to run amok for the sake of illusory short-range tax gains." Just to get the game started, try these on for size in the sentence's blank:

"The Utah (Wyoming) State Land Board"
"Wyoming Governor Stanley K. Hathaway"
"San Juan County Commissioners"
"Hailey (Idaho) City Council"
"Grand County's Economic Development Director"

There, see how easy it is to play the Environmental Game? Of course, advanced players will want to make up their own sentences with blanks. That's fun, too! More laughs, more tears!

Western..... Roundup

Utahns Debate Water Plans

House and Senate appropriations committees heard contradictory testimony on the need for the Bonneville Unit of the Central Utah Reclamation Project last month. By a series of dams, enlargement of old reservoirs, aqueducts, tunnels and pumping plants, the Bonneville Unit would bring Colorado Basin water across the Wasatch Mountains for use in Salt Lake County.

Utah Gov. Calvin L. Rampton testified that unless funds budgeted for the Bonneville unit were increased, rationing of water in population centers might be necessary in dry years. Rampton said it was only the luck of having unusually good snowpack in the mountains that has enabled Salt Lake City and County to meet a sharply climbing water demand.

The Utah chapter of the Sierra Club told the appropriations committee that construction of the Bonneville unit should be halted because there is no present or future water shortage in the Salt Lake Valley.

Club spokesman Dr. David C. Raskin of the University of Utah said, "According to the 1971 Great Basin Comprehensive Framework Study on which the Bureau of Reclamation was the lead agency, we presently have a water surplus of 1.9 million acre-feet in the Bonneville Basin. Projected demand for the year 2020 would still leave a surplus of 800,000 acre-feet."

Bureau of Reclamation officials in Salt Lake City disputed Raskin's testimony, saying that he based it on a supply of water that is, in fact, impossible to obtain. "A good share of the water is in reservoirs below ground level. . . it would require desalinization before it would be useable," they said.

The Sierra Club also opposed the project because it would cause damage to streams and wildlife in the Uinta Basin. They are concerned that water would increase growth and pollution along the Wasatch Front. They say that the project would add 14 mg of salt per liter of Colorado River water at Hoover Dam.

In light of these impacts, Raskin questioned the need to fulfill the demand for water which he said would be used to grow more surplus farm crops.

"We presently are paying as much as $258 million annually to subsidize surplus crops being grown on lands irrigated by the Bureau of Reclamation," he said. "It seems to be absolute folly to pay out such sums from public funds and at the same time spend hundreds of millions of dollars to build a project which will only add to the problem."

Raskin also express doubts about the Bureau of Reclamation's ability to meet water commitments to the Ute Indians.

The Utah Sierra Club favors diverting Colorado River water to eastern Utah to feed a proposed oil refinery. This would eliminate the need to truck oil to Salt Lake City for refining, which creates traffic congestion and air pollution.

"There is a real question as to the availability of additional Colorado River water for the CUP," Raskin said. "There is only 123,000 acre-feet of Utah's Colorado River water not committed at this time, and demand for oil development in the Uinta Basin will require a great deal of water."

Montana Eyes Its Forests

The pine-covered hilly country east and south of Ashland, Montana is popular among hunters of deer, antelope and upland game birds. But th sportsman is not the only one with his eye on this country.

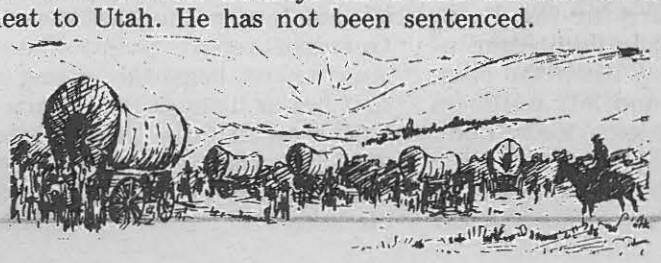
Ninety-six percent of the Ashland Division of the Custer National Forest in Montana has been leased for oil and gas exploration. More than half of the 477,000-acre division is underlain with strippable coal. The division also supplies three million board feet of lumber per year to local mills.

The U.S. Forest Service is currently studying the area and attempting to devise a land use plan. The Custer National Forest staff would like to receive comments about the area by June 15. Send comments to the forest headquarters in Billings or the ranger station in Ashland.

List of Eagle Slayers Lengthens

Two more men have been added to the list of those charged with eagle killing in Wyoming during 1970-1971. Edward Eisler, a Washington state resident, was found guilty on five counts of killing golden eagles. He was fined $200 and given six months probation. He was involved in eagle shooting from helicopters over Carbon County, Wyoming.

Max D. Lee of Murray, Utah, was charged April 26 with killing two elk, two deer, one antelope, and a golden eagle in Jan., 1971, from a helicopter over Carbon County. He is also accused of shipping the game meat to Utah. He has not been sentenced.



Sheepmen turned out in flocks at Sun Valley, Idaho, and Casper, Wyoming, to vent their feelings on President Nixon's executive order banning the use of poisons on public lands. The all-day sessions heard a parade of witnesses tell of losses to coyotes and other predators. Even cattlemen and game commissioners came to the aid of the sheep industry. John P. Burke, president of the Wyoming Wool Growers, said new legislation to protect the sheep industry should be based on realities rather than emotion. He asserted that poisons cause less ecological damage than any of the other means of predator control. (His assertion, of course, is contrary to most scientific findings.) Charles Crowell, president of the Wyoming Game & Fish Commission, said game populations are the greatest "since the advent of the stage coach." He credited the high populations to "intensive control of the wolf and the coyote."

Briefly Noted . . .

The U.S. Forest Service has released parasitic wasps in an effort to control the insect epidemic threatening western larch (tamarack) forests in Idaho, Montana, and eastern Oregon and Washington. Forests in these states have experienced a serious outbreak of the larch casebearer, an insect which retards growth, defoliates and weakens the trees so they die from other causes. Using wasps as a biological control proved successful in controlling an epidemic of the casebearer in the East in the 1930's.

* * *

A Payson, Utah, man has been charged with cruelty to a coyote. The man is alleged to have publicly displayed a coyote with its legs and mouth bound by wire. Thomas A. Little, executive director of the Humane Society of Utah, said he believes it is the first legal action in Utah involving cruelty to coyotes.

* * *

Utah has the highest birth rate and one of the lowest death rates in the U.S. The number of births in the Beehive state in 1970 and 1971 was 25.9 per 1,000 population. The national average was 18.2. Utah's death rate was third lowest in the country, 6.9 deaths per 1,000 population. The national average was 9.4.

* * *

Beginning July 1, Montana will attempt to do something about the more than 1,500 cars which are abandoned each year along her roads and on private property.

With funds of $2,000 each, counties will be required to provide auto graveyards and a way to gather up the littered autos. Scouting groups and service clubs may help with the initial clean-up. When at least 200 cars have been collected in a graveyard, the state will hire a contractor to squash the cars and ship them to markets for recycling. Funds for the state and county auto disposal will come from title transfer and license plate fees.

* * *

The Adolph Coors Brewing Company of Golden, Colo. has received the first permit to discharge treated effluent into a stream of the Rocky Mountain West. The permit, granted by the Rocky Mountain Prairie Regional Office of the Environmental Protection Agency (EPA), is part of the new federal water-pollution control program. The EPA program requires that permits be obtained by all industries, municipalities and other operations discharging wastes into the nation's waters. Coors has an "advanced" secondary waste treatment facility to treat effluent before it enters Clear Creek.

Thoughts from the Distaff Corner

By Marge Higley

My daughter and I worked our way through the trees and up the steep rock-strewn slope, the two little girls running eagerly ahead and imploring us to hurry. When we reached the top of the hill, even the children were momentarily silent. Far below us stretched a portion of the Arizona desert — hazy with heat, and fading into a background of distant purple hills.

Only hours before, we had driven across that hot desert, alive with the brilliant colors of cacti in bloom. Flame-red blossoms tipping each slender stalk of ocatilla; chunky-looking cholla with its rose-colored flowers; giant prickly pear, abloom with peach and yellow and pink. The yucca was not quite ready to bloom, but there was mesquite, catsclaw, and a small plant which covered the ground with bright yellow flowers.

From our vantage point high on the mountain, the bright blooms were only a memory — and so was the heat of the desert. The late afternoon air was crisp and chilly enough for a jacket. We turned back toward our lakeside camp, where the odor of pine trees intermingled with the smell of campfire smoke. Except for the desert scene behind me, I might have been camping in Wyoming!

I had planned the Arizona visit for some time, but the 3-day camping trip was a belated Mother's Day surprise from Martha and Dendy and the little granddaughters.

"We know you love your mountains," they had said, "and we want to show you our mountains, too."

The surprise also included a fishing license. Honesty forces me to admit that fish-wise, they should have saved their money; but fun-wise, I'm glad they didn't. Fortunately, Dendy was angler enough to keep us well supplied.

Most enjoyable of all, I think, was seeing things through the eyes of 8-year-old Lisa and 4-year-old Kelly.

"Gramma Marge — come look! We've found a lady-bug tree!"

I looked, and sure enough, at the edge of the lake was a small, leafless shrub, every branch and twig completely covered with bright orange lady-bugs. What else but a lady-bug tree?

There were also lady-bugs on a small rock which jutted out of the water.

"Can they swim?" asked Lisa, "or will they have to fly away home?" Until that moment it never occurred to me to wonder if a lady-bug could swim. We watched for awhile, and we all learned that yes, a lady-bug can swim!

We saw a bird fly to a clump of grass with worms in her beak. When she had left, we gently parted the grass and saw the nest, with three hungry, open-beaked baby birds. We retreated a short distance and watched as the mother bird fed them again and again. The bird was unfamiliar to me, but I intend to look it up in the bird book.

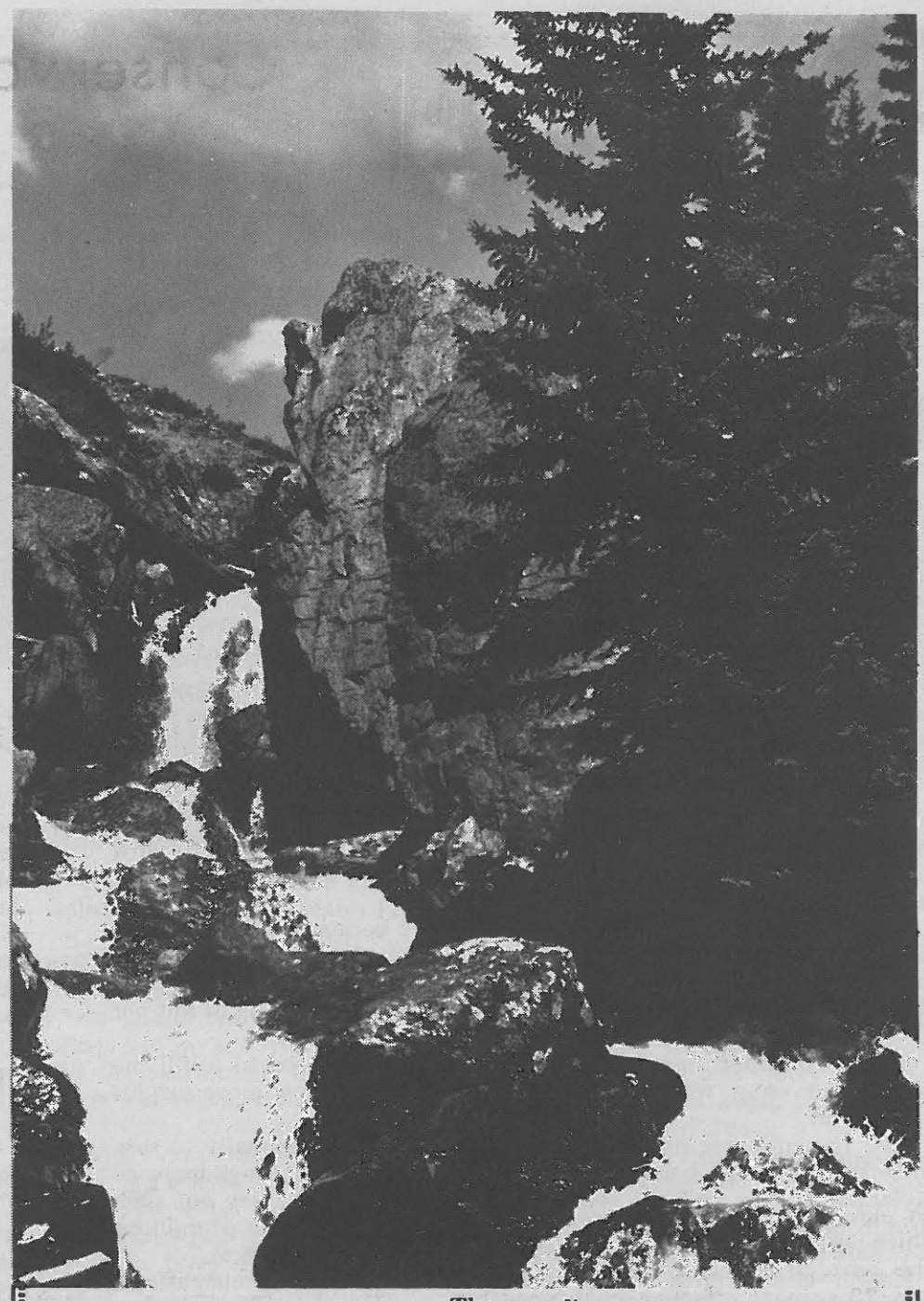
Near the campfire, Dendy was cleaning fish, with Kelly helpfully (?) picking them up and handing them to him.

"Oh Kelly! How can you stand to touch them?" exclaimed Lisa — "they feel so awful yucky!"

"Their stomachs feel yucky, and their wings feel sort of yucky," answered Kelly, "but you just ought to feel their eyes! They feel eezackly like dirty butter!"

Well, camping is always great — be it Wyoming, Arizona, Colorado or wherever. But believe me, it's lots more fun with a couple of youngsters along. You learn a lot of things you didn't know before.

They really do feel like dirty butter!



The sounding cataract
Haunted me like a passion: the tall rock,
The mountain, and the deep and gloomy wood,
Their colors and their forms, were then to me
An appetite.

WORDSWORTH: Tintern Abbey

Look Out For Poison Ivy

Poison ivy is a hazard that stalks fans of nearly all forms of outdoor recreation. Being able to spot a poison ivy plant can save considerable agony and keep an outing from an unpleasant and untimely conclusion.

The only dependable characteristic of the plant is that it produces three leaflets on each stalk. Leaves can vary in size, shape and color, and the plant can be a small shrub or it can grow into a 75-foot vine reaching into the tops of trees or covering a stone wall.

Another means of identifying the plant is its kinky, brown aerial rootlets which cover the vines and attach themselves to crevices in rocks or small openings in the tree bark. The rootlets make the vine look like fuzzy rope.

Clusters of small, five-petaled flowers appear on the ivy in late summer. Later the yellowish-green blossoms become green berries which ripen into an ivory color. Autumn turns the glossy leaves yellow, red and orange.

Poison ivy's toxic ingredient is an oily substance called urushiol, which occurs in the sap and is found in all parts of the plant. Urushiol packs an itchy wallop any time of the year and lingers on even when the plant is dead. Ivy branches cut and left outdoors on a garage roof for 18 months were found to be dangerous.

Urushiol can be transferred to the skin by handling tools or camping equipment which has come in contact with poison ivy. Even petting the family dog after it has romped in ivy-infested woods can transmit the oil toxin and cause infection.

Oil droplets in the smoke of burning ivy can penetrate light clothing and irritate exposed parts of the body.

Exposure to poison ivy calls for a thorough scrubbing with heavy-duty soap several times during the first half-hour after contact. Clothes worn in the woods should be washed before being worn again. Calamine lotion will help ease the itching in mild cases of poison ivy infection but severe blistering must be treated by a doctor.

* * *

The idea of eating human flesh is probably disgusting to most people due to simple conditioning and religious teaching. But in the U.S. it may be a good thing that the "myth" persists.

According to the **Manchester Guardian** newspaper in England, (quote) "Americans are unfit for human consumption." The **Guardian** report points out that the U.S. government bans the eating of any animal that has as little as seven parts per million of DDT in their fatty tissue. Says the **Guardian,** "It is now disclosed that the average American has 12 parts per million of the pesticide in his body." : : EARTH NEWS

Environmental Eavesdropper

LOONEY LIMERICKS

by Zane E. Cology

"Man may make a Wilderness here,"
Said the Elk to his friend, the Deer.
"I think," the Deer stated
"It's already created —
If he'd just leave it alone, I'd cheer!"

* * *

The Tokyo city government has set its sights on a standard for a "civil minimum of sunlight." The recent report of a special commission says "the right to sunlight is a fundamental right of the people." Such a far-reaching concept rivals that of the American founding fathers. They said all men are entitled to the pursuit of happiness. The controversy over sunlight has been sparked by large, high-rise buildings.

* * *

Europeans are unhappy with Italian sportsmen who kill some 250 million songbirds every year. A pledge to boycott Italian resorts until a ban is imposed on the killing has been signed by over one million Europeans.

* * *

Parasitic wasps are to be released in Denver and Fort Collins, Colo. as a biological control agent of the Dutch elm disease-carrying bark bettle. The wasps, which are harmless to humans, lay their eggs in the larva of the bark beetle. They have been 30 to 70 percent effective in fighting bark beetles in France.

* * *

A mysterious fish kill filled Lake Erie with dead fish "as far as the eye could see" last month. Elyria Water Works superintendent Robert Strutz estimated that several thousand fish died in the kill, but he could not cite the cause. "It could have been an industrial chemical spill," he said.

* * *

Gov. Nelson Rockefeller signed a New York bill giving the state land use power in the Adirondack Mountains. The new law gives an agency the power to veto projects which may impair the environment. "No impairment" means no large developments, variance in lot sizes, no uniformity in designs, and restricted industrial activity.

* * *

Americans are having fewer children. In 1972 for the first time in history, the American birth rate declined to a rate below the level necessary to sustain zero population growth. Economic factors, availability of abortion and contraception, the movement of the population from rural to urban areas and the new independence of women have all been offered as explanations for the declining rate.

* * *

South Dakota has received a Department of Transportation award for its no-mowing policy along highways. The cover left along the highways protects pheasants and grouse during nesting season.

Conservationist Dies

WASHINGTON, D.C. — Nationally known conservation leader Joseph W. Penfold, who drafted the basic legislation which led to creation of the U.S. Bureau of Outdoor Recreation and passage of several major federal environmental acts during the 1960's, died Friday, May 25, after a long illness. He was 65.

Penfold served as Washington representative and conservation director of The Izaak Walton League of America (IWLA) since 1957. He joined the League as its regional representative in Colorado in 1949. In 1958, he conceived and drafted legislation creating the Outdoor Recreation Resources Review Commission (ORRRC) and served on it. The work of the Commission led to establishment of the Bureau of Outdoor Recreation, the Land and Water Conservation Fund, the Wilderness Act, the Recreation Advisory Council, and the President's Advisory Committee on Recreation and Natural Beauty. For these achievements, Penfold received citations from Presidents Eisenhower and Kennedy.

Penfold has served as a member of the Department of the Interior's Scientific Task Force; as past chairman of the Natural Resources Council of America; on the advisory committee of the National Fisheries Center and Aquarium; as a member of the Master Plan Team for the Yellowstone-Teton Parks; as chairman of the Citizens' Committee for the ORRRC report; and as chairman of the Task Force Committee which drafted the National Parks for the Future report.

He was the recipient of many awards and the highest honors which can be attained in the field of conservation.

Joseph W. Penfold
1907-1973

Field Ecology Classes Set

An old ranch in the mountains 40 miles southwest of Cody, Wyoming, will once again be the site of a series of summer sessions in environmental studies. Valley Center for Ecology, under the auspices of Thorne Ecological Institute of Boulder, Colorado, has announced its upcoming program for public participation.

Four classes in the natural sciences will be staged at the Center. These are open to all interested adults and carry optional academic credit through the University of Colorado. They are:

— Field Methods for Teachers (June 17-23). This session will be taught by Dr. Oakleigh Thorne, II and will deal with field studies most useful to elementary and secondary school teachers.

— Rocky Mountain Ecology (July 1-7). Instructed by Dr. John W. Marr, this session will examine the various ecological processes that operate in the Rocky Mountains, as illustrated in the region surrounding the Center.

— Rocky Mountain Geology (July 8-14). Dr. Donald L. Eicher will lead an examination of the geological processes and history of the Northern Wyoming region.

— Food Webs and Energy (July 15-21). Lead by Dr. Olwen Williams, this class will discuss the principles of transformation of solar energy by living organisms.

In addition, Valley Center for Ecology will be the site of two live-in environmental encounters — one for young people and one for families. Family Eco-Camp will be staged June 24-30 and Eco-Bivuoac will take place July 22-27.

For further information, contact Valley Center for Ecology, A2Z Ranch, South Fork Star Rte., Cody 82414.

Bulletin Board

The Mother Earth News is offering a series of 65 five-minute radio programs free of charge, as a public service. Program titles include such topics as "Ecological Living," "Methane Power," "Cooking With Sunshine," and "Vocations for Social Change." For more information contact Jack Rogers, **The Mother Earth News**, P.O. Box 38, Madison, Ohio 44057 (Phone: 216-428-5161).

* * *

A governmental publication on bicycling is available now from the U.S. government printing office for 45 cents. The pamphlet, "Bicycling for Recreation and Commuting" discusses planning bikeways, problems of theft and rider safety, the history of bicycles, the National Recreation Trails System, and possible funding sources for bicyclists seeking to expand facilities. To obtain the booklet, write the Superintendent of Documents, U.S. Government Printing Office, Washington D.C. 20402.

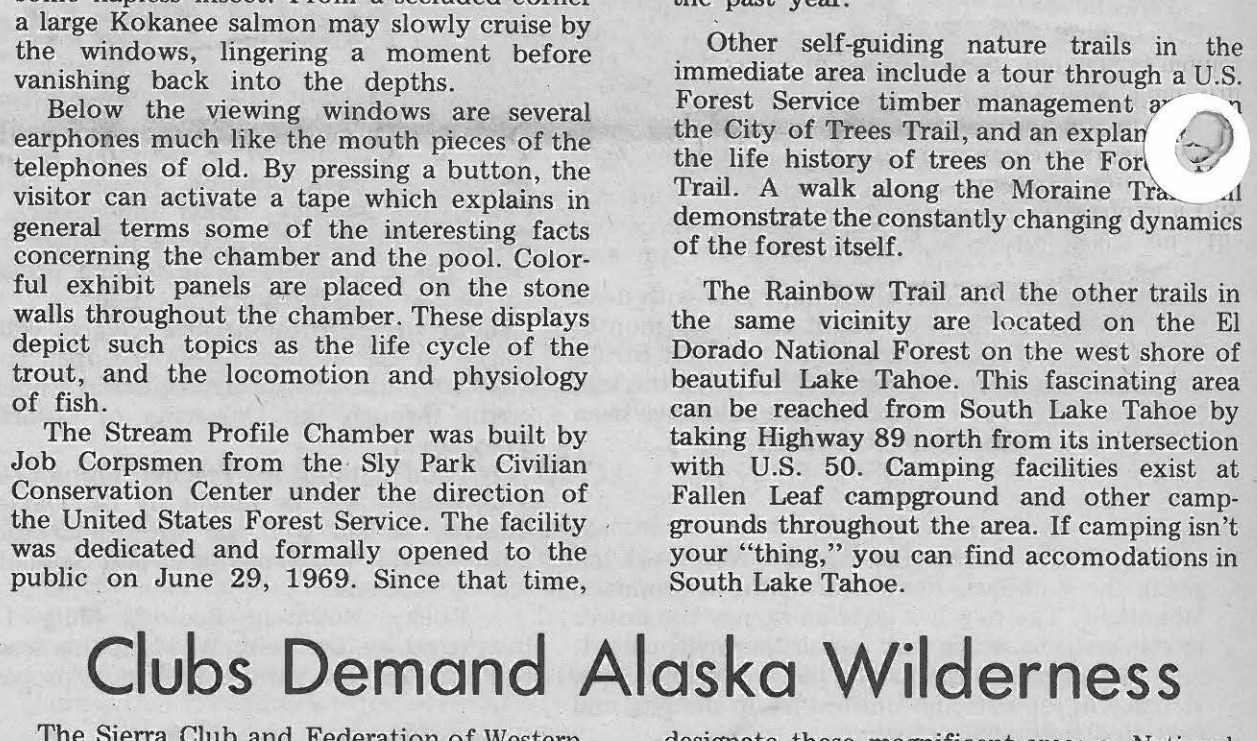
A Trout's-eye View

Text and photos by Tom Baugh

How would you like to walk through a mountain meadow? Not just any meadow, but a very special one, where the living forces of nature are carefully explained. This special meadow has a unique feature. Here you can walk below the ground alongside a beautiful natural pool. Through clear windows you can peer into the pool and watch its natural inhabitants. Rainbow trout and Kokanee salmon live here, along with the host of smaller creatures upon which these gamefish feed.

The Rainbow Trail, of which the Taylor Creek Stream Profile Chamber is a major part, wanders through an excellent example of the Sierra Nevada mountain meadows. Set against the background of majestic Mt. Tallac, the roughly circular trail begins and ends at the Visitor Information Center which is located closely adjacent to three ample parking lots. From the Visitor Center the trail drops through pine and aspen to the grassy floor of the meadow. Crossing the lower portion of the meadow, the visitor can pause along a tiny brook and measure the amount of water flowing through the brook. Further along, the trail parallels Taylor Creek. The careful and quiet observer may catch a fleeting glimpse of the large trout which inhabit the creek. There are 14 nature stations located along the half-mile trail. An information pamphlet is available at the trail-head which explains the natural history of this verdant natural area.

The Stream Profile Chamber is located at approximately the center of the Rainbow Trail nature walk. Water from nearby Taylor Creek has been diverted into Rainbow Pool. At the chamber the trail dips below ground level. The visitor's first view inside the roomy chamber is of the Pool itself. The diverted waters of Taylor Creek bubble and flow past one entire side of the chamber, creating the very real impression that you are somehow personally involved in the complex life processes of the pool and its inhabitants.



The Taylor Creek Steam Profile Chamber located along the Rainbow Trail in the El Dorado National Forest, California.

A rainbow trout in Rainbow Pool.

You become aware of the rocky floor of the pool as the waters of Taylor Creek swirl by the windows. As your eyes adjust to this strange new world, you will notice the tremendous numbers of insect life within the waters of the pool. On the rocks the larvae of the caddisfly creep about in their armored cases of sand and small pebbles. Looking deep into the pool, past the gnarled roots of an old snag, you may catch a sudden flash of movement as the Rainbow trout darts from under the roots to the surface, inhaling some hapless insect. From a secluded corner a large Kokanee salmon may slowly cruise by the windows, lingering a moment before vanishing back into the depths.

Below the viewing windows are several earphones much like the mouth pieces of the telephones of old. By pressing a button, the visitor can activate a tape which explains in general terms some of the interesting facts concerning the chamber and the pool. Colorful exhibit panels are placed on the stone walls throughout the chamber. These displays depict such topics as the life cycle of the trout, and the locomotion and physiology of fish.

The Stream Profile Chamber was built by Job Corpsmen from the Sly Park Civilian Conservation Center under the direction of the United States Forest Service. The facility was dedicated and formally opened to the public on June 29, 1969. Since that time, public interest has led to the point where over 300,000 people visited the area during the past year.

Other self-guiding nature trails in the immediate area include a tour through a U.S. Forest Service timber management a[illegible]n the City of Trees Trail, and an explan[illegible] the life history of trees on the For[illegible] Trail. A walk along the Moraine Tra[illegible]l demonstrate the constantly changing dynamics of the forest itself.

The Rainbow Trail and the other trails in the same vicinity are located on the El Dorado National Forest on the west shore of beautiful Lake Tahoe. This fascinating area can be reached from South Lake Tahoe by taking Highway 89 north from its intersection with U.S. 50. Camping facilities exist at Fallen Leaf campground and other campgrounds throughout the area. If camping isn't your "thing," you can find accomodations in South Lake Tahoe.

Clubs Demand Alaska Wilderness

The Sierra Club and Federation of Western Outdoor Clubs today called for permanent protection of at least 80 million acres of Alaska wilderness.

Roger Mellem, Acting Northwest Representative for the two conservation organizations, presented the conservationists' position at the start of two days of official hearings in Seattle. The hearings, before the "Joint Federal-State Land Use Planning Commission" are part of a series being conducted by the Commission throughout Alaska and at four selected cities in the "lower 48." The series is designed to seek public input in planning for the protection of 80 million acres of "National Interest" lands withdrawn by the Secretary of the Interior last September, under terms of the Alaska Native Claims Settlement Act.

"At the minimum, all 80 million acres — which is considerably less than one-fourth of the land area of Alaska — should be given statutory protection for its high wilderness qualities," said Mellem. "Congress should designate these magnificent areas as National Parks, National Wildlife Refuges, National Wildlands, and Wild and Scenic Rivers, so the most spectacular scenic resources of our largest state can be permanently protected," he stated.

Mellem also noted that the vast bu[illegible] Alaska's land area will be open to "mul[illegible] use" and resource extraction, including well over 100 million acres of land given to the State of Alaska alone. He said that none of the 80 million acres of "National Interest" lands should be used for development purposes. Specifically he said that conservationists oppose the creation of new National Forests from the 80 million acres withdrawn by the Secretary of the Interior, "since the U.S. Forest Service has such a poor record in southeastern Alaska, with logging sales which have had a devastating effect on the environment."

Mellem said that "Alaska's superb wilderness and wildlife is the heritage of our planet, and at least some of it should be handed on to our children, and our children's children."