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USING OUR WILDERNESS RESOURCES

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A few weeks ago the San Francisco press gave considerable attention to some remarks by an eminent zoologist who suggested that, if we are to retain any wilderness resources in the future, we will have to start deliberately controlling our population growth. Whether his conclusion was right or wrong, the fact that such a suggestion was seriously made and received serious attention is evidence that the wilderness problem is a real one and a big one -- far transcending the local issues which usually govern our thinking about particular tracts of wilderness.

Both the localized issues and the broader ones seem to be charged with a high degree of emotion. I was glad to accept the invitation of the State Chamber today because, in view of both the importance and the emotional content of the wilderness problem, thoughtful discussion of it by broadly representative groups such as this one is essential if wise wilderness policies are to be pursued.

I would like to discuss the use of wilderness -- not as an enthusiast for wilderness recreation, although I happen to be one; not as an exponent of a strong and permanent forest products industry, although I happen to be that as well; not as a representative of any of the several groups of forest resource users who have a keen and natural interest

in wilderness problems -- but rather from the viewpoint of a wildland manager, anxious to use the resource for the maximum long-term net benefit of whatever kinds the resource will permit.

What is a wilderness resource?

What is wilderness anyway? Webster's Dictionary says it is a pathless waste of any kind. The Wilderness Bill now in the Congress refers to it as an "area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain". Forest Service regulations state that "a wilderness area is an area of at least 100,000 acres characterized by primitive conditions of transportation and habitation. It contains no provision for passage of motorized transport, and resorts, organization camps, summer homes, and commercial logging are excluded." The National Wilderness Preservation System as proposed in the Wilderness Bill includes: (1) all National Forest land classified on June 1, 1958 as wilderness, wild, or roadless areas plus certain primitive areas; (2) each park and monument in the National Park System which embraces a continuous area of five thousand acres or more without roads; and (3) certain other designated areas of Federal land. According to the National Wildlife Association, the areas presently designated in these wilderness categories, but excluding Alaska, Hawaii, and continental Indian Reservations, amount to a little less than 39 million acres.

The uses of wilderness as listed in the Bill are "recreational, scenic, scientific, education, conservation,

and historical use and enjoyment by the people in such manner as will leave (it) unimpaired for future use." For the next few moments I would like to focus attention on two of these uses -- the scientific use and the recreational use -- because they play a dominant role in the current argument over wilderness. Preservation of examples of wilderness is important for science because the impact of Man on our biological environment has been profound. To fully understand that impact and evaluate its consequences for the future of Man mself, sample areas where the impact is kept to a minimum are of obvious importance as scientific standards of reference. Wilderness also provides the combination of solitude and natural surroundings which most people agree furnish modern Man with a valuable recreational and emotional experience. To me and to most wildland managers, these needs are sufficiently self-evident that I take for granted the necessity of managing some land for strictly scientific purposes and some in a way which will prevent the complete obliteration of natural solitude. Scientific and inspirational goals should therefore be given coordinate weight with timber and forage cropping, watershed protection, and intensive recreation in arriving at the optimum balance of either multiple or single uses of wildland areas. As the complexity of society increases and intensity of resource use grows, the scientific and inspirational goals may well require greater emphasis in the future than they do today. But let us take a realistic look at the problem of what needs to be done if we are to

approach these two goals of maintaining reference points for science and natural solitude for an increasing population.

Some limitations of "natural laboratories".

Can we maintain primitive lands as scientific laboratories where (as one eminent ecologist recently put it) man is restricted to the hunting, fishing, and nomadic stage? For two reasons, the possibilities here are somewhat limited. First, it is no longer possible to restrict the impact of man on most wilderness land in the United States to his influence as a hunter, fisherman, or nomad. It was too late to do this once our programs of universal fire protection and predator control became reasonably effective. Thus, the wilderness areas are already subject to a considerable degree of wildland management. The vegetation is not what it would have been had fires from natural causes been allowed to run unchecked for the past fifty years. The present animal population is far different from what it would have been in the absence of programs of predator control. Special hunts to control the size of the elk herd in Yellowstone Park and the experience with the deer herd on the Kaibab plateau are simply two of many examples that even in a wilderness from which Man is virtually excluded, we have by no means excluded the biological impact of Man on the area.

The point here is that we cannot create biological islands simply by drawing a line around them on the map. Provision of the kind of primitive conditions needed for the scientist's check plots will thus depend on the most deliberate and careful control of all biological factors; that is,

on land management of a highly intensive kind aimed at specific scientific goals.

A second limitation stems from the impact of the natural biological processes themselves. A wilderness is anything but static. It goes through a steady change in the distribution of various plant and animal forms and in the balance between them. Occasionally, unmanaged biology may produce conditions where catastrophic change in the natural environment is inevitable unless Man intervenes. Fifteen years ago, an epidemic of Engleman spruce beetles started in a Colorado forest generally of a wilderness character. Before it terminated, largely as a result of natural checks, it had destroyed five billion board feet of spruce timber in Colorado with obvious impacts far beyond the wilderness itself. In Yosemite National Park you can see the effects of the lodgepole needle miner on the undisturbed forests of Tenaya Basin. Recently, the direct loss due to epidemic insect damage on the forests of the Kern Plateau area has been estimated at 25 million board feet per year. The scientist may look on certain catastrophes of this kind as highly valuable for his purposes. The trouble is that when the effects cannot be confined to the laboratory (and insect and disease epidemics in a wilderness cannot be so confined), someone has to choose between the scientific values and the other values jeopardized by science. Thus, the possibility for catastrophe in the wilderness raises issues similar (at least in kind if not in degree) to those of atomic testing, where the needs of science must be weighed against the hazards to Man in areas other than science.

In a limited number of very favorable topographic situations, such as the Isle Royale in Lake Superior or certain mesas of the West, these interactions between the wilderness and the area around it may be so minimized that true natural laboratories can be maintained. Wherever this possibility exists such laboratories should be preserved. But for the vast bulk of wilderness, biological interaction with conditions outside the wilderness cannot be prevented. In all such areas, scientific goals will only be achieved through very careful control of all aspects of the environment -- that is by deliberate and effective management of the wilderness for scientific purposes.

Some problems in wilderness recreation.

Wilderness preservation has severe limitations as a means for meeting the recreational and inspirational needs of a growing population. However natural it may be, fire or epidemic in a wilderness would be disastrous for any kind of recreational values. This point has been recognized by most advocates of "strict" preservation, who suggest that Man should maintain a degree of fire, insect, and disease control even in a wilderness, although how this might be achieved without excessive cost is not entirely clear.

But a more important problem is this. The very growth in demand for forest recreation represents the greatest prospective threat to maintaining forest environments of natural solitude. A summer-time visit to some of the areas now designated as wilderness is all that is needed to demonstrate this point. A friend of mine returned from the High Sierra

Wilderness last summer and reported sitting beside the trail for ninety minutes while a single organized group of campers passed by in the other direction. At that point, my friend was a long way from natural solitude, even though in the midst of a so-called wilderness environment.

No land use conflict is growing faster than this one between large numbers of people desiring wildland recreation and the wilderness goal of natural solitude. How sharp the conflict may become is suggested by projections of future demand for forest recreation in California which indicate that by 1965 demand for wilderness-type recreation will be twice what it was in 1955. To emphasize the importance of this trend, let me point out that if these projected increases in National Forest recreational use actually develop, we will have to meet demand for about 30 million visitor days of forest recreation in 1965, compared with only 17 million in 1955. Natural solitude will be hard pressed to survive such an onslaught.

Moreover, if we were to try to solve the problem by enlarging the available area of wilderness so as to maintain the 1955 proportion between wilderness users and wilderness land, we would need almost 4 million additional wilderness acres in California by 1965. This would mean adding to the wilderness system an area equivalent to forty percent of the commercial timber area on the National Forests in California. These facts suggest to me that wilderness preservation as a policy has drastic limitations as a means for meeting needs for primitive recreation environment. We simply do not have

available enough land to meet prospective increases in demand for primitive environments by means of wilderness preserves.

A more effective answer to the problem of providing natural solitude on a broad scale for larger numbers of people is to recognize that both primitive and mass recreation are essential goals in wildland use, and then to manage the land both inside and outside wilderness areas so as to increase the supply of these particular kinds of values. My own profession of forestry has been seriously at fault, I think, in not giving more attention to the development of land management practices better designed to serve the full range of recreational values. But there is a clear evidence that this management approach holds very great promise. For many years National Park Service foresters have been manipulating vegetation -- that means cutting timber -- in order to maintain views and other aesthetic values in Yosemite Valley. The Forest Service has demonstrated clearly on the Angeles and San Bernardino National Forests that timber harvesting by commercial methods is not only compatible with the highest forest recreation values but is actually essential if those values are not to be destroyed by the biological process.

Thus, much more careful management, not only of the vegetation but also of the people who use primitive recreation areas, is essential if the needs of a growing population are to be met. We have done so little of this kind of management that many people fail to understand its potentialities. Yet it is only through such management that we can find a way out

of the dilemma posed by an increasing population demanding more and more opportunity to get away from the culture that population creates.

Some shortcomings of the Wilderness Bill. (The Bill referred to is S.1123, 86th Congress, 1st Session. Some of the following comments may not apply to certain revisions of this Bill which have subsequently appeared.)

The aspects of using wilderness for science and recreation that I have discussed provide some yardsticks against which policies such as those embodied in the Wilderness Bill can be judged. In giving legislative recognition to scientific, recreational, and related objectives in wildland management, the Bill would place such goals on a par with timber production, watershed protection, and other recognized forest uses. Such recognition would strengthen the ability of the administrative agencies to achieve and enforce an optimum balance among the several forest uses. To this extent wilderness legislation seems to me important and desirable.

But beyond this statement of goals, the present Wilderness Bill does not provide effective means for achieving the public interest in scientific and recreational values. I have argued that both the scientific laboratory and the environment of natural solitude can only be maintained in the face of inevitable biological processes and almost as inevitable population growth by very careful and intensive management of all wildland areas, both inside and outside the parts specified for inclusion in the Wilderness Preservation System. The Wilderness

Bill will not, I think, help to achieve the kind of intensive management so urgently needed if the recreational, scenic, scientific, and conservation objectives sought by the Bill are to be achieved. The Bill is based on the ideal that these values can be maintained by mere preservation of the status quo. I have already shown why I believe this premise is faulty in the light of what we know about biology, the prevalence of Man's impact on the earth, and the social pressures incident to vast increases in population.

Moreover, the Wilderness Bill in its present form compromises drastically with its own avowed policy of strict preservation. It permits grazing and the use of aircraft or motorboats on National Forest Wilderness units where these practices have already become established, subject to such restrictions as the Secretary of Agriculture deems desirable. It permits necessary measures of insect and disease control within National Forest Wilderness, subject to conditions prescribed by the Secretary. It permits prospecting, mining, or the establishment of reservoirs and water conservation works on the National Forest Wilderness when authorized by the President of the United States. It permits road construction necessary for authorized mining and reservoir works, again when authorized by the President. Thus, the Bill clearly recognizes what I have suggested as the most pressing need -- intensive management of the land for that use or uses which, on each area, will contribute most to net public benefits.

Although it thus tacitly admits the need for a multiple use approach, the Bill scatters responsibility for recognizing needs for various types of use among the Congress, the President, and the Secretaries of Agriculture or Interior. None of these authorities is charged with the responsibility of determining the optimum balance among all competing uses. This is not an auspicious arrangement for achieving the best use of a complex resource.

The Forest Service, the Park Service and other land administering agencies have long been aware of the need for preservation of natural environment in our mountain areas. The fact that we have relatively large wilderness areas in California today is concrete testimony to the ability of these agencies both to sense these needs and to meet them in a substantial degree. In view of this record of performance, why adopt legislation which takes responsibility for these very difficult decisions away from the very organization which demonstrated their ability to deal effectively with them?

The Wilderness Bill also provides a National Wilderness Preservation Council to promote wilderness preservation. Establishment of such a special purpose Council will surely encourage establishment of other Councils designed to advance the interest of other single purpose uses of the forests. At a time when we need to be using every means to secure better coordination of multiple uses and better resolving of the conflicts between such uses, establishment of one or more special interest Councils seems a backward step.

Cannell Meadows -- an example of the need for intensive management.

If we are to meet our real needs for natural solitude and primitive environment, we must do far more than establish well-enforced "No Trespassing" regulations around existing roadless areas. We need to use every device at our command to get increased benefits from the wildland areas. The Cannell Meadows Working Circle is perhaps a good illustration of the potential available in this kind of approach.

After careful study by the Forest Service and review by two different Secretaries of Agriculture, the multiple use values of the area have been judged to be greater than the values for primitive recreation alone. This policy will permit salvage of insect-infested timber, avoiding a conspicuous waste of wood and permitting control of an epidemic potentially hazardous to other areas. Proper salvage logging at Cannell Meadows can contribute very greatly to meeting the demand for mechanized forest recreation. It can provide roads necessary for public access and greatly reduce insect damage which is clearly disastrous to recreational values.

Once the initial salvage has been completed, proper recreation management in Cannell Meadows can play a very significant role in relieving the growing pressure on currently overburdened forest recreation facilities further to the north. Some relief of this growing pressure on more remote and more scenic wilderness is vital if primitive conditions are to be preserved there. Cannell Meadows, under intensive use for recreation,

will relieve pressure on these other areas and serve in a highly significant way to protect their wilderness character.

The properly balanced development of Cannell Meadows and of all our other multiple use forest areas seems to me to be the most urgent and constructive step which we can take, if the use of wilderness itself is to be maintained on a primitive basis in the California of tomorrow.

Memo by George . . .

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Dear Ernie:

Here is a copy for your reference.

California is having a problem some years away in Idaho — maybe?

Regards

Geo

G. L. CROOKHAM, JR.