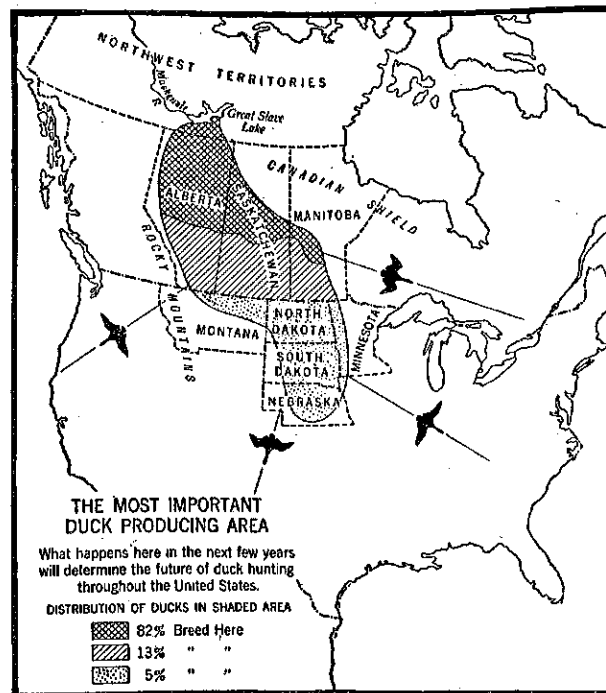




Waterfowl map of "Ducks Unlimited" which carries its own sadly misleading legend

"Ducks Unlimited" Latest Scheme to Defer Adequate Protection

A PROGRAM launched by More Game Birds in America "to restore the wild duck factory" in the Canadian breeding grounds, is now being accorded wide publicity. We are told that "Ducks Unlimited", a national organization of American duck hunters recently incorporated in the District of Columbia, seeks the preservation and restoration of Canadian duck breeding grounds. For this purpose the foundation hopes to raise several hundred thousand dollars annually during the next five years.

In explaining its purpose and aims, the Foundation asserts:

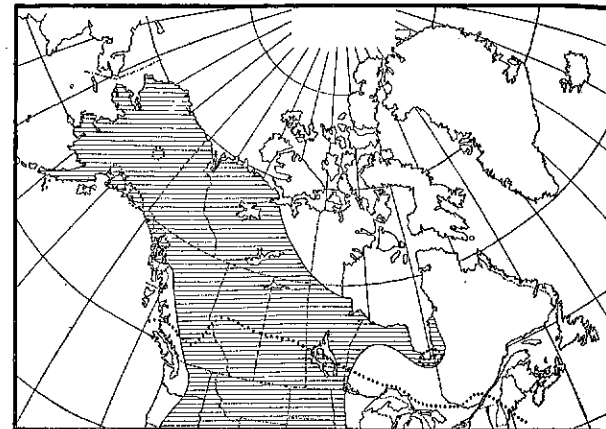
"Extension of the federal refuge program will help the conservation of wild ducks, but even maximum production on all the breeding grounds in the United States cannot result in a marked increase in the total continental duck crop.

"Only five percent of the prairie breeding ducks now nest in the United States, it is estimated. Thirteen percent nest in the southern half of the three Canadian provinces. Eighty-two percent, however, have been driven still farther northward to the last unspoiled limits of the duck factory.

"Geological barriers—the Rockies on the west and the Canadian Shield on the east—come together near the northern border of Alberta. Here the ducks are literally being 'driven to the wall' by the advance of civilization.

"What happens in the Canadian portion of the great duck producing area in the next few years obviously will determine the future of duck hunting throughout the United States."

With most of the conclusions thus stated, we are in hearty agreement. The percentage estimates are probably not far from the truth. We differ only as to the geographi-



Principal breeding range of the pintail, one of the more abundant of our ducks, which nests in suitable places throughout. The mallard and the green-winged teal occupy nearly the same range, and within it are also the main producing areas of the scaups, widgeons, buffleheads, shovelers, scoters, goldeneyes and most of our geese. This region thus produces most of our waterfowl. The dotted line shows the northern limit of shooting for sport; it is also the limit of drought, general agriculture, and intensive settlement. The region south of it is now almost shorn of its former importance as a waterfowl nursery by these hazards.

cal limits and the reasons for the presence of the eighty-two percent that it is stated "have been driven northward."

In the accompanying map, distributed by More Game Birds in explanation of the statements we quote, the cross-hatched portion really represents the best producing area per square mile for a number of species of prairie-nesting ducks. These are the canvas-back, redhead, bufflehead, ruddy and ring-necked ducks, and the blue-winged teal. These species are all so reduced in numbers as to deserve total protection, and the four first named are all so protected, at least nominally.

But there remain several other species that can be fairly classed as prairie nesters whose breeding ranges extend much farther north. These include the pintail, mallard, green-winged teal, shoveler, widgeon, and scaups of two species.

On the map that we here reproduce is shown the Canadian and northern plains breeding range of the pintail. The mallard and green-winged teal also occupy most of this territory, while the baldpate or widgeon, scarp, bufflehead and shoveler have less extensive ranges, mainly west of the Canadian shield, but extend to Alaska. There are several other species, such as the scoters, not properly classed as prairie nesters, but which are just as good ducks to most shooters, that also nest in the millions of ponds and marshes that airplane maps show us are scattered over about two millions of square miles in northern Canada and Alaska. (Continued on page 242)

In the March issue of Nature Magazine we published an article critical of our past expressions on the subject of the wilderness. At the same time we promised an article that we regarded as a splendid analysis of the wilderness question. We are willing to rest our case for the wilderness with this discussion by Mr. Marshall.

The Universe of The Wilderness Is Vanishing

By ROBERT MARSHALL

Photographs by the author unless otherwise credited

WE HAD ridden all day, across one deep gulch after another, until we reached the sprawling log cabin in the bright valley of Wild Horse Basin. Here we unsaddled, twenty-five miles from the end of the nearest wretched road, where automobiles could penetrate only with much bouncing, and seventy-five miles from the nearest paved highway. After we had turned the horses loose, Jik went into the low slung hut to doze for a while, and I headed up the hillside and across the mesa to where they told me Green River Gorge lay two miles away.

It was a sunny, leisurely stroll through an open stand of junipers, and it filled me with the notion that the world was gay and easy and peaceful. There seemed to be an impenetrable isolation between me and the world of repression, hunger, disease, warfare, unemployment, and endless machinery, which lay somewhere beyond the farthest visible mesa. The day was so bright among the junipers and the air so quiet, you couldn't think of anything else.

The mesa started to slope gently downhill. I passed an old cowboys' campfire with a pile of wood beside it, and pushed my way through a thick clump of juniper to a rocky ledge. Then all at once the mesa broke away below me. It broke away into a gorge so deep and tremendous that space and time were lost in its immensity. There were no longer any physical measurements, no substantial world for comparison, only an overwhelming feeling of infinity that surged out to fill up every recess of the mind.

I don't know when I changed from standing to sitting, or whether I sat there for minutes or hours. I can't recall in what order impressions surged over me. There was no sequence; just observations and stimulations and perfection, all jumbled outside the zone of reason. Far below a strong, gray river tore down the canyon with a roar so distant it seemed as if it must have been in some orbit of different life. Beyond it were myriad

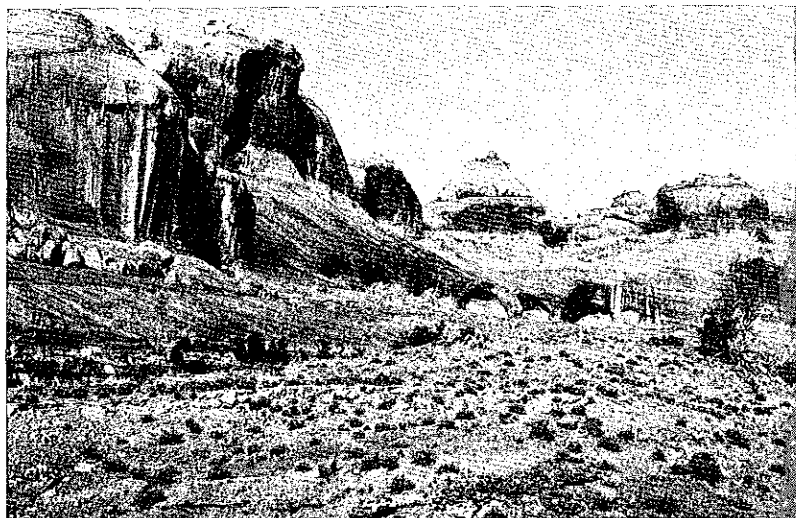


BUTTER CREEK IN THE MOOSE RIVER WILDERNESS IN THE ADIRONDACKS

side canyons winding tortuously down to the main river, each one a huge slit in the crust of the earth, worn down by the force of water through one parallel layer after another of clean, tan rock until you lost count of the strata. But you knew that each layer of rock represented in its up-building a passage of time longer than all the period of human history, and each slit represented as long and tedious a process of tearing down.

I sat on the brink of this two-way infinity—incomprehensible, far beyond any age or world. The wind blew up from the river, fresh and mysterious against my face. The air was alive with the faint odor of juniper. Far, far away, beyond the river, beyond the canyons, beyond countless miles of mesa, so far away that they were sometimes mountains of earth and sometimes mountains of an ancient, dried out moon, rose a snow-covered divide that seemed to bound the universe. Between me and this dimmest outpost of the senses was not the faintest trace of the disturbances of man; nothing, in fact, except Nature, immensity, and peace.

I know that someday I will read about a road being projected down the gorge of the Green River. I have read similar articles about many other wildernesses. The article will state how many miles the distance between Vernal and Moab will be shortened, how many men will get work, how many tourists will leave their money



SANDSTONE WIND SCOURING IN THE HEART OF THE LARGEST ROADLESS AREA IN THE UNITED STATES IN SOUTHEASTERN UTAH

along the route, how many millions of dollars it will cost the government. The article will say nothing about whether all of these values might not be less important than the value that one person could formerly experience while sitting alone with infinity. It will say nothing of the great gashes quickly dynamited by man into the timeless rocks that previously had been gashed only by the forces of geologic ages. It will say nothing of a universe destroyed.

Yet the universe of the wilderness, all over the United States, is vanishing with appalling rapidity. It is melting away like the last snowbank on some south-facing mountainside during a hot afternoon in June. It is disappearing while most of those who care more for it than anything else in the world are trying desperately to rally and save it.

To many the story of the vanishing wilderness will bring only a negative response. "What's the difference; where's the loss?" they will say. "Only romantic children imagine that we can bring back the days of Lewis and Clark. Let's grow up and realize that primitive adventure is an unnecessary luxury we can't afford."

I would answer that we can afford to sacrifice almost any other value for the sake of retaining something of the primitive. It is not a new idea, for Thoreau, more than 80 years ago, wrote: "Our life would stagnate if it were not for the unexplored forests and meadows which surround it. We need the tonic of wilderness. We can never have enough of Nature. We must be refreshed by the sight of inexhaustible vigor, vast and titanic features, the sea-coast with its wrecks, the wilderness with its living and decaying trees."

To countless people the wilderness provides the ultimate delight because it combines the thrills of jeopardy and

beauty. It is the last stand for that glorious adventure into the physically unknown that was commonplace in the lives of our ancestors, and has always constituted a major factor in the happiness of many exploratory souls. It is also the perfect esthetic experience because it appeals to all of the senses. It is vast panoramas, full of height and depth and glowing color, on a scale so overwhelming as to wipe out the ordinary meaning of dimensions. It is the song of the hermit thrush at twilight and the lapping of waves against the shoreline and the melody of the wind in the trees. It is the unique odor of balsams and of freshly-turned humus and of mist rising from mountain meadows. It is the feel of spruce needles

under foot and sunshine on your face and wind blowing through your hair. It is all of these at the same time, blended into a unity that can only be appreciated with leisure and which is ruined by artificiality.

In the summer of 1929, at the height of the prosperity tourist boom, I was standing on the rear deck of one of the Alaskan steamships, looking at the mountains that rose majestically from the shores of Resurrection Bay. A loquacious fellow traveler walked up beside me and started to promote a great idea. In effect he said: "This trip is pretty nice, all right, for a person who don't care anything for adventure, but I was reading an article coming up here on the boat about a man called Stefansson. He did all sorts of explorations, way up north here, somewhere north of North America. These Alaskan companies are missing a big bet. What they ought to do is build a road up to the mouth of the Mackenzie River and then ferry you across to some of them islands north of the mainland, and there's what the tourist would really like, to go somewhere where



THE CONTINENTAL DIVIDE AT THE HEAD OF THE NORTH FORK OF THE POPO AGIE RIVER, WIND RIVER MOUNTAIN WILDERNESS

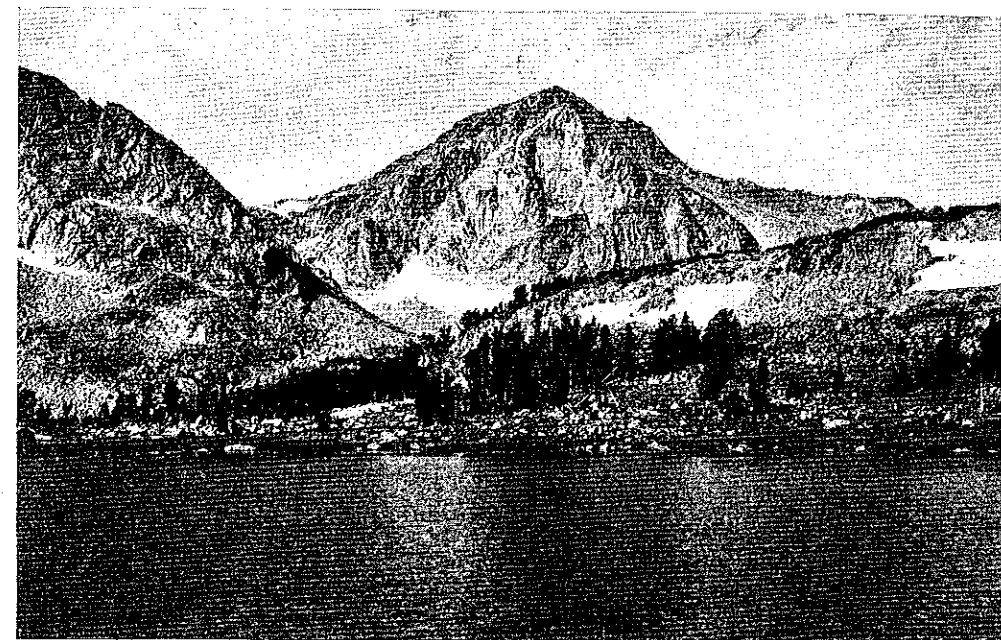
everyone hasn't gone before. Give every man a chance to be a Stefansson!"

Last autumn I drove over a new highway that took me by a lakelet in the Rocky Mountains. I had been to that lakelet about seven years before. At that time it was just out there among the trees in the wilderness, with all that you could see and hear and feel in harmony with the primitive. I remember there were half a dozen ducks swim-

ming around near the inlet, as unconcerned as if they had never seen a human being before. Everything about the place, from the bright green sedges that surrounded the lake, to the lodgepole-covered mountain sides that rose from its shores, to the rock-covered pinnacles that jutted far above it, was a perfectly new, untrammelled world, just as if it had come fresh from the dawn of time. It was far beyond the outposts of civilization, where only the competent and the adventuresome could delight.

But last autumn that whole world was changed. I was driving by just another body of water to be glimpsed for a few minutes; driving by in a closed automobile, over a broad highway. I had the feeling that the road and the auto and I were just a bit of any city, rudely dumped into the primitive I had known, completely shattering every impression of the untrammelled. The former thrill to all of my senses was crushed out by the great, scarring avenue, the gas-filled atmosphere, and the noise and stuffiness of a closed automobile. Gone too was the exhilaration of competence. There was no more adventure than on the sidewalks of Central Park. Lodgepole-covered mountain sides yet rose in the background, and there were still jagged peaks, but the whole effect was of something totally different and of something vastly inferior.

In pointing out the damage that this road did, I am not stating positively that it was not justified. I am sure that the beauty that can yet be seen has brought additional joy into the lives of many people who would never have been able to visit the area as a wilderness but who still derive some thrill from this inferior version of the original, somewhat as the old lady who can't ever have the opportunity of seeing the real portrait of Whistler's Mother, still gets a thrill from the modified version on the postage stamp. Unfortunately, however, my analogy is not complete. While Whistler's Mother-on-the-postage-stamp did not in the least damage the original painting,



WASHAKIE MOUNTAIN AND WASHAKIE LAKE IN THE WIND RIVER MOUNTAIN WILDERNESS

the road to which I have alluded had wrecked the values of the wilderness. It was as much of a discord on the shore of this western lakelet as it would be if the Philadelphia Orchestra were suddenly to stop in the middle of Schubert's *Unfinished Symphony* and break into the strains of *Dancing Queen to Queen*.

There are many things that depend for their value on their total impression on all of the senses. Fragments of their unity mean almost nothing. The Mona Lisa has given many people a supreme esthetic thrill, yet if you cut it up into little pieces one inch square and distributed it among the art galleries of the world so that millions might see it where hundreds see it now, neither the millions nor the hundreds would get any genuine value. Similarly, if the French government in order to augment its revenues sold to Pepsodent for a few million francs the right to paint a modest advertisement on just a minor fraction of the famous portrait, the Mona Lisa would be dead. Of precisely the same nature are the *Unfinished Symphony* and wilderness lakelets. All of them are destroyed by fragmentation or pollution.

Wilderness skeptics in almost all arguments raise the question: "Why should we set aside a vast area for the enjoyment of a few hundred people when roads would make that area available for half a million? Aren't we obligated to consider what will bring the greatest good to the greatest number?"

The doctrine of the greatest good to the greatest number does not mean that this laudable relationship has to take place on every acre. If it did, we would be forced to change our metropolitan art galleries into metropolitan bowling alleys. Our state universities, which are used by a minor fraction of the population, would be converted into state circuses where hundreds could be exhilarated for every one person who may be either exhilarated or



THE GRAND CANYON WILDERNESS ON THE HUALAPAI INDIAN RESERVATION, ARIZONA

depressed now. The Library of Congress would become a national hot dog stand, and the new Supreme Court building would be converted into a gigantic garage where it could house a thousand people's autos instead of Nine Gentlemen of the Law.

Ridiculous as all of this sounds, it is no more ridiculous than the notion that every acre of land devoted to outdoor recreation should be administered in a way that will give the maximum volume of use. Quality as well as quantity must enter into any evaluation of competing types of recreation, because one really deep experience may be worth an infinite number of ordinary experiences. Therefore, it is preposterous to hold that the objective of outdoor recreational planning should be to enable the maximum number of people to enjoy every beautiful bit of the outdoors.

It is worth noting that the use of the primitive outdoors is increasing by leaps and bounds. Most wilderness areas have ten people traveling in them today for every one person who traveled in them twenty years ago. A number are already overcrowded. Furthermore, whenever the general economic level of the country rises, wilderness use is bound to rise also. A striking illustration of this principle from a slightly different angle is furnished by the Trail Rider trips that the American Forestry Association has initiated. They have made it possible for eastern people, with incomes as low as \$1600 a year, to visit these

Rocky Mountain wildernesses, something impossible at former costs.

A few years ago if you wandered into any of the large eastern stores and asked for the ski department, you were ushered with some amazement into an obscure corner of the building where you might be shown two or three pairs of skis and a few wistful looking poles. Today all this is changed. When you now enter such a store, you merely follow the crowd to the ski department, and after an hour or two of elbowing you may finally be fortunate enough to get a clerk to wait on you. The railroads put on low-rate ski trains that carry enthusiastic people as much as 400 miles to favorable skiing grounds. Tens of thousands who a couple of years ago went for auto rides on Sundays now have suddenly discovered the thrill of doing something on their own power.

All the while, year after year, the United States becomes more and more mechanized. The life of one person after another has been saturated by machinery. Human beings require compensations, and it seems inevitable that as the machine age expands the need for an escape will also expand. It is this need that has already been reflected in the increased use of the primitive, and the craze for skiing. Certainly, it will be immensely expanded in the future as the cost of primitive trips becomes lower, the average income higher, and the need for an escape from the all-abounding machinery more intense.

Of course, non-primitive forms of recreation will continue to bring joy into the lives of multitudes to whom the true wilderness would be as unattainable as the canals of Mars. However, this should not mean that the minority that is able to enjoy the far greater elation of wilderness travel must have every primeval tract destroyed by routes of facile transportation. It would seem only reasonable that the available outdoors should be divided among both types of enjoyment. Each group should be tolerant enough to respect the variety of pleasure that the other desires. Similar tolerance is the accepted rule with most types of esthetic experience. The old lady who admires the postage stamp replica of Whistler's Mother does not demand that the original be destroyed. The person who prefers the jazzy strains of *Dancing Queen* to the *Unfinished Symphony* does not insist that the Philadelphia Orchestra should alter its program in order to appease his musical taste and wreck those of the symphony lovers'.

It would seem just as possible for the person who enjoys the outdoors by motor to obtain in ample extent his favorite recreation without extinguishing much more of the primitive. There are already about 3,500,000 miles of roads in the United States, enough at 50,000 miles a year to last a person 70 years, with the opportunity for building a large additional mileage of splendid scenic value without invading any important wilderness areas. America is big enough and rich enough for both primitive and non-primitive recreation, if there is some subordination of selfishness and rational, balanced planning.

All types of commercial land use conflict fatally with primitive values. The commercial activities that today most frequently invade the wilderness are irrigation, waterpower development, mining, grazing, and logging.

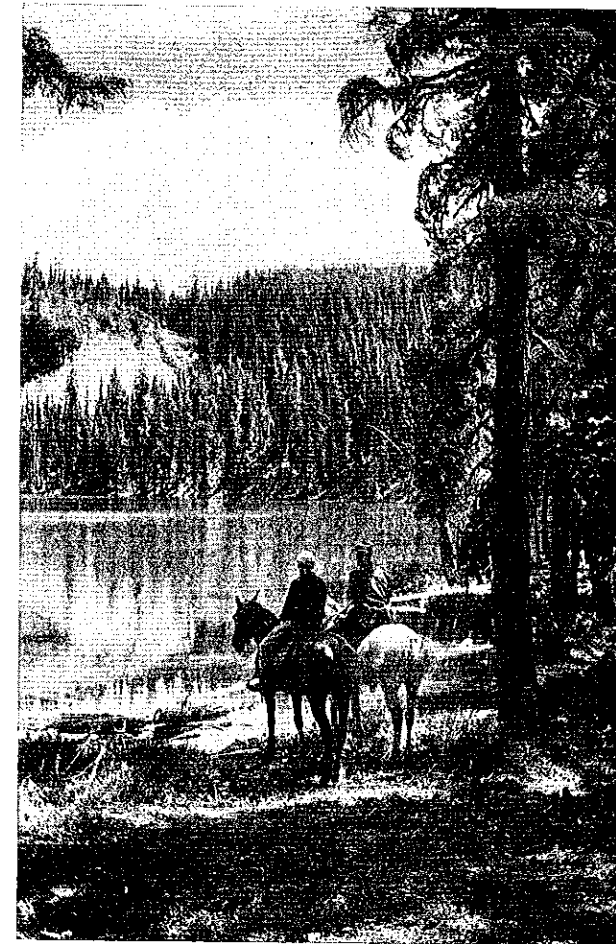
There is need all over the West for more water to enrich the farmlands, and consequently irrigation developments are constantly being projected into areas that have not yet been upset by man. Every project of this nature should be subjected to vigorous scrutiny to determine whether the increased amount of water made available for agriculture compensates for the destruction of recreational values.

In a similar way, it is desirable to balance the gains and losses that might come from each proposed water-power project. A river, with a concrete dam that impounds a rising and receding lake, is wrecked as a primitive retreat, however important the power may be. It is necessary to consider whether the power or the primitive recreation could be obtained better at another place.

In an area of great scenic value the sight of a prospect hole and ore dump is apt to look more drab than the remains from an ordinary forest fire. However, it has long been one of the American heritages that every man should have the right of prospecting to his heart's content, and consequently prospecting is legally permissible on practically all federal lands except the National Parks. From the standpoint of rational planning it would be far better if we were to reserve for future generations as much of our mineral wealth as we can spare today, because mineral resources are not replaceable. Nevertheless, many minerals are being forced on the market by eager miners more rapidly than there is any genuine demand. Therefore, it seems logical that the government, while it cannot prevent prospecting on most of its land area, should not facilitate it through road building.

All through the Western rangeland the grazing of sheep and cattle is altering the native vegetation. The number of livestock in that vast domain between the 100th meridian and the Sierra-Cascade divide is greatly in excess of what the land is capable of supporting. Consequently, although the great majority of the present herds are at best merely large enough to give their owners a fair subsistence, even they will have to be reduced materially in order to curb the disastrous soil erosion that is rapidly gnawing away the land. Such a reduction will make it impossible to reserve from grazing any large areas of range land in addition to those National Parks, Wildlife Refuges, and portions of National Forests which have already been withdrawn, unless provision is first made for supporting the excess population of the interior West.

The national need for wood as a raw material is an important one. However, we should remember that, even though it may mean increased price, substitutes for most wood products are available, but there is no substitute for the beauty of the primeval forest. When once the forest is cut, this not only terminates forever the immense esthetic values of the primeval vegetation, but it also necessitates the invasion of the area with facilities for



LAKE COMO IN MOUNTAIN LAKES PRIMITIVE AREA, ROUGE RIVER NATIONAL FOREST, OREGON

mechanical transportation. This damage to much of the primitive is justifiable on the basis of balanced needs. However, there are major limitations. If we do our logging in a way that will enable the forest to reproduce itself, there will be no difficulty in growing all the wood we require on three-quarters of our forest area. If we continue to deplete permanently most of the area that we log, then we will cut every acre of timberland in the country and exhaust our wood supply. The solution of our timber problem is not to cut over every acre of virgin forest, but to practice forestry.

At the present time the most prevalent destruction of the wilderness comes from truck trails that are built for fire protection. Nevertheless, these fire roads are by no means certain to reduce the fire loss. They have one important advantage and two important disadvantages. The great advantage is that truck trails enable men to be brought to fires more rapidly and in a fresher condition than if they have to travel all the way by foot. This unquestionably is a significant consideration and in some cases it will be of dominant concern. However, it is far from being the whole problem.

Every person in the woods is a potential source of fire, and therefore when an area that had been accessible only by trail suddenly becomes accessible to autos there

will be a vast increase in the number of forest fires. I realize that many advocates of truck trails urge theoretically that they should be stub roads, on which only the cars of the protective organization would be permitted. However, in actual practice, public pressure has generally forced the opening of such truck trails to general traffic. In many cases public pressure has also forced the government to join disconnected truck trails into a regular transportation system. As an example, the Ely-Buyck road, which cuts the wilderness of northern Minnesota in two, was started as a couple of far removed stub truck trails to be used solely for fire protection. Gradually these were lengthened, and then, all at once, before anybody seemed to realize it, there was a highway right through the heart of this wild country.

Even if it were possible to keep such truck trails closed to public use, they would still involve an increased fire hazard because of the opening that the right-of-way makes in the canopy of the forest. Such an opening admits the sun and wind, which dry out the needles, twigs, branches, old logs, and other debris lying on the floor of the forest. The drier such materials become, the more inflammable they become, and the more rapidly and fiercely fire will spread. Furthermore, when the mineral soil of the wild forest is exposed in road building, weeds generally become prolific and dry up in the autumn, making a much greater fire hazard than the normal forest vegetation. Even if truck trails are kept closed to automobilists, they can not be kept closed to hikers, hunters, and fishermen who want to walk along them, and many of such people inevitably throw away lighted cigarettes, dump out pipe heels, and leave camp fires unextinguished. When this is done along a truck trail with its increased inflammability over that which exists along the narrow opening of a foot trail, it will mean that fire will start more readily and burn more fiercely.

In every area to be protected, it is necessary to balance the advantages and disadvantages that truck trails possess from a fire protection standpoint. If the balance appears to be in favor of truck trails, then it is necessary to consider whether this advantage is sufficiently important to offset the wilderness values destroyed. If the protection without roads over a considerable period of years has been effective enough to hold the average annual burned area to a small fraction of one percent, then it would seem as if the slight improvement which would be possible could seldom balance the destruction of wilderness conditions which roads and truck trails render inevitable.

Another conflict with the primitive occurs in the development of transportation facilities. If a new highway is genuinely needed for the economic welfare of a large group of people, there could ordinarily not be any valid objection. However, roads that are not genuinely needed are being proposed constantly. I know of three seriously-

advocated highway projects that would cost many millions of dollars apiece, that would cut across our three largest remaining forest wilderness areas, but which from a transportation standpoint would merely decrease by a few hours the distance between some small cities. The road now being constructed down the Locksa River in Idaho, through the heart of the old Selway wilderness, was actually praised by local boosters on the ground that it would shorten the distance from New York to Portland, Oregon, by forty miles. The real reason behind many proposed roads is that they will tend to divert traffic to towns that hope thereby to derive an additional income from the traveling public. However, it is obvious that with a limited amount of money to be spent by the traveling public, one town's gain will be an equally estimable town's loss, and the net result will be approximately the same as with the chain letter hoax.

It is well to bear in mind what is sometimes easy to forget, that millions of farmers are still floundering in the mud for a good part of the year because there is not enough money available to reconstruct on decent standards the vast road mileage which has already been scraped out on a bouncing, quagmire basis. It seems far better to spend what money is available in relocating and improving such existing roads from farm to market than in building entirely new roads of dubious merit. It is also true that if we are to maintain our existing roads on a reasonable standard, the cost will run well into the hundreds of millions of dollars, and therefore we ought to consider carefully before we construct any additional mileage to increase this huge financial burden.

The world is full of conflicts between genuine values. Often these conflicts are resolved entirely from the standpoint of one of the competing values, and thus whole categories of human enjoyment may be needlessly swept away. It is far more conducive to human happiness to attempt some rational balance that will make possible for the immensely different types of people the varied values they crave. Emphatically this is true of the conflict between the values created by the modification of Nature and the values of the primitive.

Unfortunately, such rational balance will not be likely unless the well-organized groups who desire to invade the wilderness are counteracted by well-organized groups for its defense. Legislators, and through them government bureaus, are controlled in the final analysis by public pressure, and if this pushes entirely from one direction, effective balancing of values is impossible. Therefore, the fate of unmodified Nature rests in the activity of its friends. If they continue to be too busy or too indifferent to unite in its defense, then the universe of the wilderness is doomed to early extinction. If, on the other hand, they believe that its preservation is worth the sacrifice of some precious time and energy, and if they will take the trouble to become vociferous, there is no reason why material areas of America should not be kept primitive forever.

Things to Think About

The Congress has increased the number of members on the Select Committee on Government Reorganization from seven to nine in each house. Accordingly, the House has appointed Representatives James M. Mead of New York and Frank C. Kniffin of Ohio to fill the two vacancies created, and the Senate has named the following members: Senators Joseph H. Robinson of Arkansas, James F. Byrnes of South Carolina, Harry F. Byrd of Virginia, Joseph C. O'Mahoney of Wyoming, Alben W. Barkley of Kentucky, Pat Harrison of Mississippi, Charles L. McNary of Oregon, John G. Townsend, Jr., of Delaware and Robert M. LaFollette, Jr., of Wisconsin.

The House has passed House Resolution 11, continuing the life of the special committee created in the 73rd Congress to investigate all matters pertaining to the replacement and conservation of wildlife. The Committee is instructed to report to the House not later than January 3, 1939, the results of their investigations and their recommendations for legislation.

A Bill, H. R. 5043, granting the consent of Congress to two or more states to enter into agreements or compacts for cooperative effort and mutual assistance in the preservation of wildlife resources has been introduced by Representative William T. Byrne of New York.

A bill providing for a permanent system of flood control, H.R. 4208, has been introduced by Representative Claude V. Parsons of Illinois.

To provide for a survey, and the classification and conservation of the soil resources of the United States is the purpose of a bill, H.R. 4410, introduced by Representative Maury Maverick of Texas.

Because of the recent severe floods in the Ohio and other mid-western rivers, various legislators in both Houses of Congress have introduced bills authorizing surveys, with a view to flood control, of the following major rivers: the Potomac, Arkansas, Delaware, upper Mississippi, Santee-Cooper and the Ohio.

One of the principal wintering places for geese and ducks using the Pacific flyway has been bought by the Biological Survey. It is Spalding Ranch, located five miles

south of Willows, California, and has been designated the Sacramento Migratory Waterfowl Refuge. The new refuge, comprising 10,775 acres, "is small compared with some other sanctuaries being set up by the Biological Survey in the national program of waterfowl restoration," but officials regard the area as important because of its strategic location. Since it is naturally attractive to waterfowl, the Survey plans but little development work on the area, although small dams, dikes and levees will be constructed to impound water from spring run-offs from higher land. Among the birds that will benefit particularly by this refuge is the cackling goose, a small species that breeds in a limited area in northwestern Alaska and now winters chiefly in the Tule Lake and Sacramento sections.

The Roadside Improvement Committee of the Federated Garden Clubs of Michigan have drawn up a bill to be presented to their state legislature designed to curb indiscriminate roadside advertising. It is hoped this original draft may serve as a suggestion to other states, and it is urged that similar organizations throughout the country write to W. Woodbridge Dickinson, chairman of the Roadside Improvement Committee, 209 North Walnut Street, Lansing, for a mimeographed copy of the bill for purposes of study.

The bill does not propose to eliminate roadside advertising; it is merely a regulatory measure designed to prevent abuses and to clean up roadsides. The measure would make possible the creation of scenic zone highways and scenic zones on commercial highways, and would prohibit signs within fifty feet of the right of way and within 500 feet of a highway or railroad crossing. Since it is very temperate, the measure will probably escape active outdoor advertising industry opposition.

Under a ruling of the Virginia Alcoholic Beverage Control Board all types of outdoor advertising of alcoholic beverages is prohibited. This applies equally to billboards and exterior signs on places of business. While the Board is not concerned with the restrictions of billboards, this ruling does affect them materially.

In the interests of safety and appearances, the County Commissioners of Spokane County, Washington, have passed an ordinance requiring permits for all structures within 300 feet of the center line of all main highways. Permits are granted only when the proposed structures are deemed in the public interest. A second ordinance licenses billboard companies and requires a fee for each board. It also prohibits signs within 300 feet of an intersection, or public park, forest or playground.