JANUARY 1970

NATIONAL PARKS *Magazine*

The Fight for the Everglades

A YEAR AGO this Association warned editorially of the impending destruction of Everglades National Park and Conservation Area Three in the Florida Everglades by a gigantic airport planned by the Dade County Port Authority for the Big Cypress Swamp just north of the Park. During the ensuing year the American people aroused themselves against this destructive project as never before in conservation history.

Everyone knows now that the jetport would occupy 39 square miles of irreplaceable water-producing marsh in southern Florida. Pollution by exhausts, fuels, pesticides, and noise would be fatal to the plant and animal life of the Park, the Area, and the Swamp. Destruction would be compounded by huge access highways and supporting buildings and facilities—even by new cities. The region for many miles around would feel the destructive impact of huge jumbo jets and supersonic transports from across the world.

On a lesser, but nonetheless mortal scale, plans have proceeded apace for the completion and operation of an initial runway for the jetport. Significant federal assistance has been given from the beginning for the construction and completion of the runway. Such assistance is regarded by conservationists as violating the Department of Transportation Act, which prohibits aid to projects affecting public park and recreation areas unless there is no feasible alternative and unless all possible planning has been done to mitigate ecological damage.

As we now report this battle from the front, with a dateline as of our deadline late in November, decisions are teetering at the interdepartmental level as to whether operation of the runway will be permitted. In our judgment operation will cause great havoc and lead eventually to an environmental catastrophe.

Early last year a powerful coalition of conservation and economic organizations met in the Board Room of this Association in Washington to oppose the jetport. A joint protest, concurred in eventually by 23 national organizations, was dispatched to Transportation Secretary Volpe. A meeting of the Coalition was eventually held with Assistant Secretary Braman. The establishment of an interdepartmental committee on the problem was thereafter announced; a technical report prepared under the direction of Dr. Luna Leopold of the Geological Survey, calling the jetport and runway intolerable from an ecological viewpoint, was eventually made public; Interior Secretary Hickel and Transportation Secretary Volpe thereafter announced opposition to the jetport and grave doubts about the runway.

At a meeting at the headquarters of this Association in September the Everglades Coalition reaffirmed its opposition to the jetport, emphasized its opposition to the runway, and expressed its concurrence in the findings of the Leopold report.

It is possible that, by the time this issue of our magazine appears, a decision may have been made against operation of the runway; or approval may have been granted on condition that safeguards developed by Secretary Hickel be applied or on condition that removal will occur when an alternative site has been specified and facilities have been completed. Or it is conceivable that operation of the runway will be permitted, and the essential federal assistance given, despite the law. We hope that this will not happen. But in any event, it is imperative that the fight against the runway and the jetport continue and that conservationists across the land redouble their opposition to these fantastic examples of environmental folly.

The Nixon Administration has much to gain from a strong stand against the runway and jetport. It can win the enthusiastic commendation of a highly influential coalition of powerful organizations. But the Everglades Coalition is merely the fighting front for the great majority of the American people who are determined that the evil destruction of their life environment that has marked recent decades must stop.

The County Commissioners of Dade County, Florida, who also serve as the Board of Directors of the Dade County Port Authority, prime mover in the jetport and runway plans, would also have much to gain by joining forces with the Everglades Coalition and accepting suitable alternative sites for the runway and any airport that may be built.

We think also that the major airlines, which have played their part in supporting the jetport and runway from the beginning, should have a look at their public relations. Do they really wish to engage in a battle across the years with a growing majority of the American public, which will certainly delay completion of the facilities they desire and probably prevent construction eventually?

Ahead, for the Everglades Coalition, is leadership in getting a land and water plan for central and southern Florida. This means guarantees by the Army Engineers and the Central and Southern Florida Flood Control Commission that the water releases specified by the Department of the Interior from Lake Okeechobee and the Conservation Areas for Everglades National Park will in fact be made in perpetuity. It means that Big Cypress Swamp must also be regarded as a conservation area from which water will be supplied to Everglades Park and the west coast communities. It means that drainage projects like that presented to the Monroe County Court late in November, which would deprive the coast communities and the Park of lifegiving water, must be halted. This Association and National Audubon Society have joined in opposing this drainage project in court. It also means that great land-use regulatory or acquisition programs must be developed for Big Cypress Swamp and within the exterior boundaries of Everglades National Park. Many methods are available for such controls or acquisition, but land and water within the Swamp and Park must be managed for the permanent preservation of the environment if the interests of the people of Florida and America are to be served.

—A.W.S.

Conservationists who wish to help in protecting Everglades National Park Conservation Area Three and the Great Cypress Swamp can do so by writing the following:

President Richard M. Nixon
Chairman, Environmental Quality Council
The White House
Washington, D.C. 20500

Walter J. Hickel
Secretary of the Interior
Department of the Interior
Washington, D.C. 20240

John A. Volpe
Secretary of Transportation
Department of Transportation
Washington, D.C. 20590

Claude R. Kirk, Jr.
Governor of Florida
Tallahassee, Florida

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COVER *"Clearing Mists" by Chuck Abbott*

Relatively few people visit the Grand Canyon in winter, so most visitors miss dramatic frosty views such as on our front cover. Similarly, most tourists simply enjoy the breathtaking vistas from the rim. Readers of this issue may accompany Donald E. Weaver, Jr., on a trip to the world of the inner canyon below the rim—departure point, page 10.

National Parks Association, established in 1919 by Stephen Mather, the first Director of the National Park Service, is an independent, private, nonprofit, public-service organization, educational and scientific in character. Its responsibilities relate primarily to protecting the national parks and monuments of America, in which it endeavors to cooperate with the National Park Service while functioning as a constructive critic, and secondarily to protecting and restoring the whole environment. Membership dues, which include subscription to *National Parks Magazine*, are annually: $8 associate, $12 contributing, $40 supporting, $80 sustaining, and $500 life with no further dues. School and library subscriptions $6.50 per year. Single copies 75¢. Contributions and bequests are needed to carry on our work. Dues in excess of $8 and contributions are deductible from federal taxable income, and gifts and bequests are deductible for federal gift and estate tax purposes. Mail membership dues, correspondence concerning subscriptions or changes of address, and postmaster notices or undeliverable copies to Association headquarters in Washington. When changing address, please allow six weeks' advance notice and include old address (send address label from latest issue) along with new address.

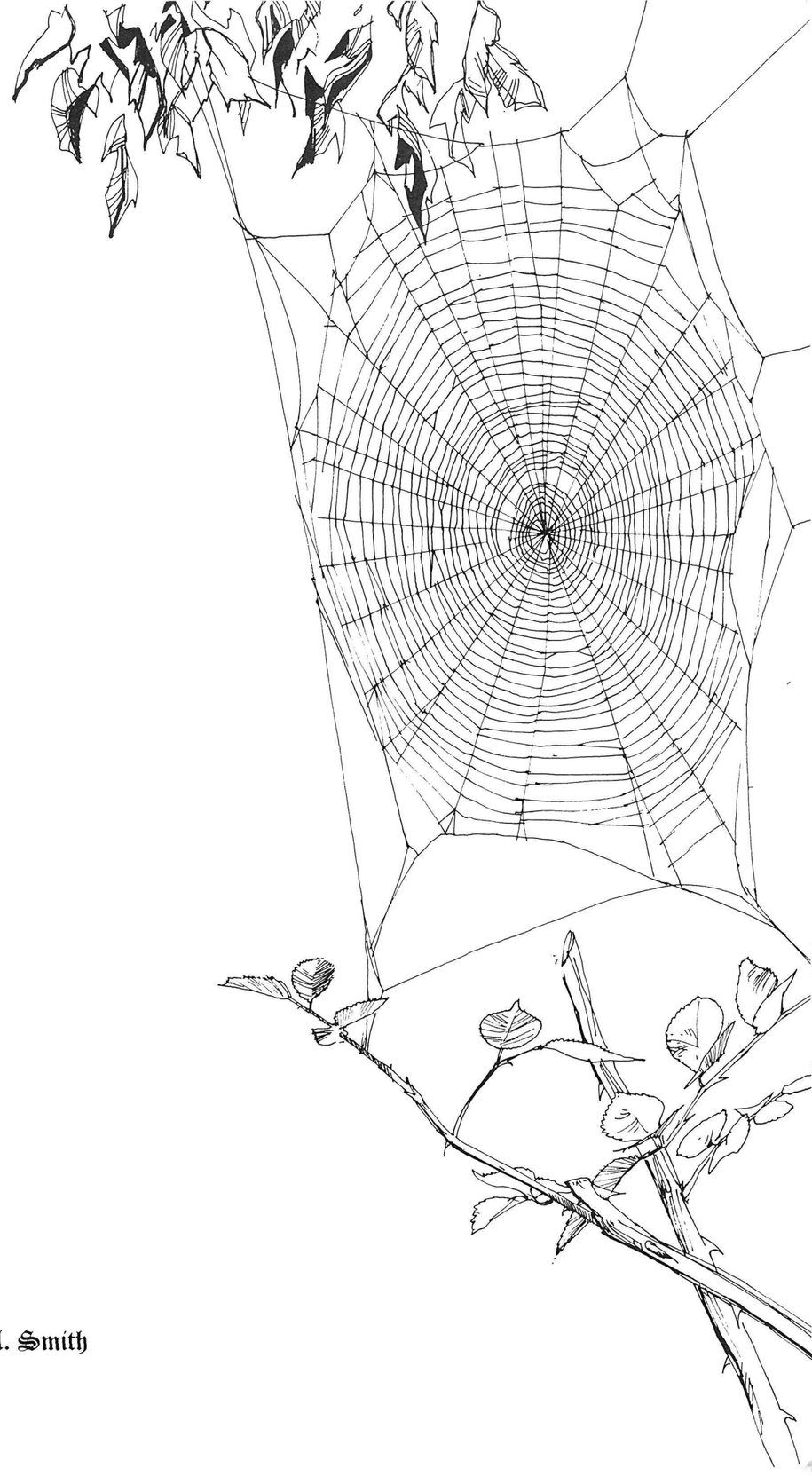
NATIONAL PARKS ASSOCIATION • 1701 EIGHTEENTH STREET, NW • WASHINGTON, D.C. 20009

The Good Earth and the Golden Rule

Lowell Summer

A FEW dangerous situations confronting mankind today may result from ignorance, but most of them stem from socially destructive attitudes—chiefly self-serving or hostile ones. At the opposite pole from these destructive attitudes is the Golden Rule, "And as ye would that men should do to you, do ye also to them likewise." How much safer, happier, and more constructively occupied the world would be—and wealthier, too—if this rule guided the actions of politicians and nations as well as all ordinary folk.

For the present discussion the precise wording of the Golden Rule is not so important as the socially responsible attitudes that it stands for: concern for the welfare of others and a readiness to cooperate with, rather than fight or exploit, one's family, neighbors, country—all mankind. And now a multitude of fateful developments makes it imperative that this concern be extended to the good earth itself—the natural environment—because we are beginning to find with a vengeance that the health or sickness of the environment will in the rather near future spell health or progressive sickness for mankind as well.



Drawing by Joseph A. Smith

Some people believe that the political and biological state of the world is becoming so precarious and explosive that a new religion is needed. The concepts to be outlined here might serve as a starting point for a new religion, or they could as readily be considered simply an updated extension of current religion, via the Golden Rule. Either way, the multiplication of national and world problems requires more mature and cooperative attitudes for managing ourselves, our social and political institutions, and our deteriorating environment.

The world has looked with favor on the Golden Rule for centuries; it needs only to be put into practice. Likewise the national park idea has been increasingly well regarded in the present century, though not yet within a broad enough ecological context. But so far the relationship between these two concepts has hardly received official consideration at all.

Though the Golden Rule, or its synonym for our purposes, "cooperation," is insufficiently followed, nevertheless there has been a gradual trend toward its wider adoption. Cooperation has been taking place even since primitive man became an increasingly social animal. Now the global saturation point toward which we are hurrying will force us to a global adoption of the rule—or else.

Certainly we have a long way to go in this respect. Endless examples in the daily news would be ridiculous if they were not so dangerous and costly. Almost always the objective of this discord, stubborn bargaining, and open conflict is to squeeze as much advantage as possible from the other side while giving as little as possible in return. With little apparent realization that they must be partners, not opponents, labor leaders boast of concessions wrung from management; similarly, industry commonly extracts from consumers the highest prices and most rapidly obsolescent products that the traffic will bear. Instead of improving their own internal conditions and incorporating the good points of the opposing system, communists squander their resources in attempting a worldwide overthrow of capitalism, and vice versa, to the mortal peril of all. Instances of good will and cooperation are not lacking in the world; but they receive comparatively little attention by the news media, while jealousy, hatred, exploitation, and violence seem almost unlimited by comparison—and are condoned by large segments of the human family.

Overcrowding, with resulting underprivilege and insecurity, is an important cause of social breakdown and world strife. Man is no different from other animals in this respect, as recent studies of rats and other social animals have demonstrated. John B. Calhoun (*Scientific American*, February 1962) found that when overcrowded like humans in big cities, rat society becomes stratified. A powerful minority enjoys ample food, family life, and living space, while keeping the rest of the population in slums. The slums are inhabited by roving gangs, sex deviates, celibates, recluses, schizophrenics unable to communicate with other rats, and mothers that habitually desert their young. The tensions and stress of overcrowding and conflict cause measurable damage to the internal organs of all other mammals so far investigated, as with man.

In the natural world of plants and animals, cooperation, though mostly unintentional, occurs in scale, diversity, and complexity unmatched in the human world. Examples can be taken from almost anywhere: Yucca moth caterpillars feed on the tissues of the Yucca but without harming it; when they become moths they collect the Yucca pollen and apply it to the stigma with their mouth parts, which are specially modified for this task. Then they lay their eggs in the blossom for the next generation. The Yucca is absolutely dependent upon these moths for its reproduction.

On Isle Royale the wolves "test" each moose before attacking; if their intended prey is healthy and self-confident enough to stand and fight, the wolves quickly give up. Instead, they pull down the weak or diseased animals, the very young and the very old. This culling action keeps the moose population healthy; it keeps the forest healthy too, by preventing the moose from multiplying until they destroy forest reproduction—as happened before wolves came to the island. The healthy forest produces a maximum annual food supply, which keeps the moose healthy and thus able to offer maximum resistance to the wolves. This resistance in its turn makes the task of getting enough food sufficiently hard for the wolves that only the strong and healthy individuals survive, and only enough pups can be raised to balance wolf losses through accidents and ageing.

In the Everglades, alligators make large holes in the mud to which they retreat during periods of drought. These holes, with their multitude of fissures and subsurface drainages, provide vital refuges from drought for fish, crayfish, and other small inhabitants of the Everglades. The alligator levies a toll from some of these animals but makes it possible for most of them to survive until the rains come again.

Such unconscious cooperation among species is virtually a universal way of life on earth. Through this process the earth's raw materials are recycled indefinitely without being transported very far from their points of origin. Until about 500 years ago man, too, lived for the most part within this cooperative ecological web, consuming agricultural and forest products not far from their points of origin and returning the resulting waste products to the soil.

It is true that from biblical times, if not before, some human populations conceived the notion that they lived at the center of the universe and that it all had been created for their use and comfort—as conquerors. But such self-centered and eventually self-defeating attitudes were for a time comparatively harmless because the human populations lacked the numbers, machines, and technology to destroy large areas. Nevertheless, the devastation of once fruitful and forested regions of the Middle East and, later, the transformation of Europe from a vast primeval forest to a patch-

Lowell Sumner, now retired, was for many years chief biologist of the National Park Service. During his long career he conducted extensive studies on southwestern and Alaskan wildlife. In addition to having produced valuable reports based on these studies, he is a co-author of the important work, *Birds and Mammals of the Sierra Nevada.*

PHOTOGRAPH BY DAVE MECH

Culling of moose by wolves benefits both species.

work of farmlands and cities was a small token of future intent and capabilities.

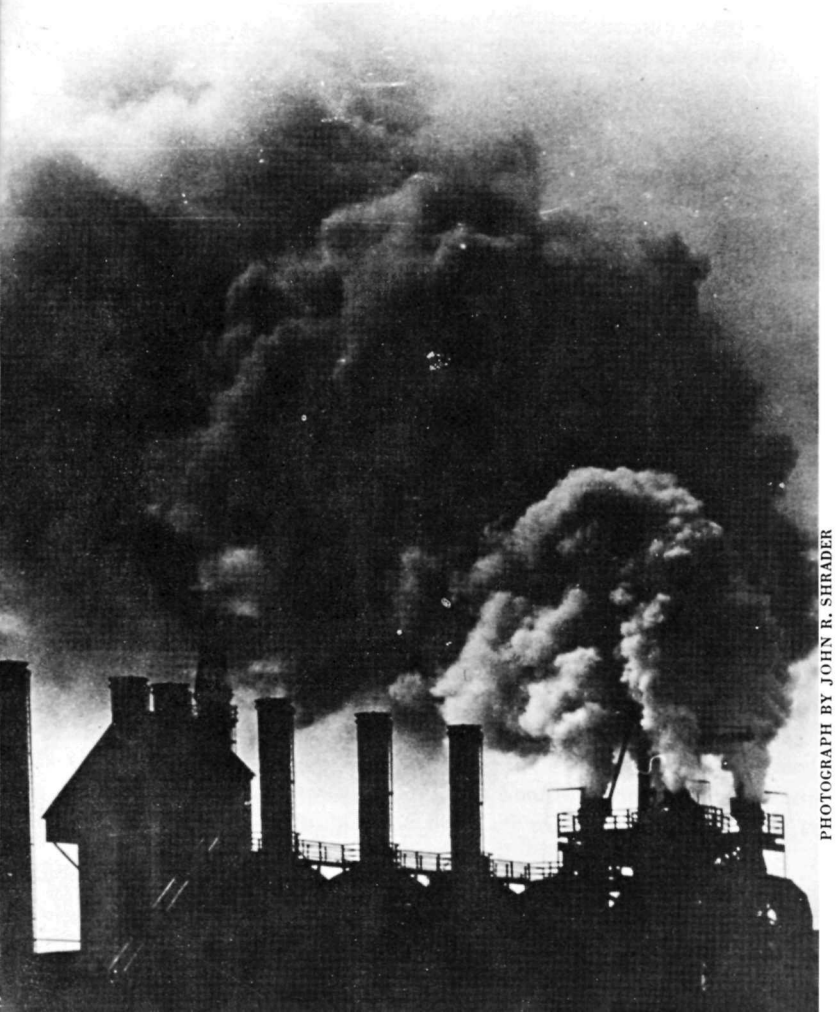
The industrial age brought preventive medicine and falling death rates as well as ever more powerful machines. The constantly increasing populations began to spread over the face of the earth and conquer it in earnest. Encumbered as they were with almost unlimited ecological ignorance and the delusion that they were the Masters, their one-way exploitation of the earth's resources reached the proportions of a geological force after World War I and literally changed the face of the earth.

By technical stratagems man attempted to exempt himself from some of the fundamental natural laws and for a time thought he had succeeded. The law of natural selection was among the first to be disregarded, with the result that present human populations contain higher percentages of hereditary defectives who are as free to breed without restraint as normal persons. Likewise, the principle of Malthus that human populations multiply until they are checked by famine and disease was prevented for a time from operating, in the wealthier countries at least, by mechanized agriculture. Still another basic law that man disregarded was the principle of ecological recycling under which every species returns what it borrows from the ecosystem. He embarked on a gigantic withdrawal of raw materials from the soil and water and transplanted them to other countries and continents. He even withdrew oxygen from the air. He began a relentless transformation of the earth's marvelously diverse plant and animal forms into a worldwide, ever-growing volume of human tissue.

In the history of the earth there are virtually no parallels to such explosive exploitation. But within the human body there is one: the fatal disruption of its harmoniously cooperating billions of cells when overrun by constantly multiplying cancer cells, which take only for themselves without cooperating or giving. Cancer cells continue to take, and to multiply without restraint, until they bring down their world in ruin and death. Human society considers itself capable of planning the future instead of drifting into it, though this capability is not often demonstrated. Additionally society has developed a set of ethics for the basic purpose of protecting itself from harmful behavior. Conceivably, these ethics might function as intended if kept up to date with respect to changing social and environmental conditions and current needs.

Depletion of natural resources has been most commonly identified as a threat to man's well-being and perhaps eventually his survival. The decline of once-powerful nations, particularly in the Mediterranean region, offers some ground for such fears. Harrison Brown, in *The Challenge of Man's Future*, has shown that substitute sources for most vital materials can be synthesized, or extracted, by increasingly complex and expensive technical processes—*provided* the intricate pattern of highly specialized and coordinated know-how and equipment is never destroyed by social upheaval. But he shows that if this destruction should ever happen, reorganizing a cooperative technology of the magnitude and complexity now required to reach or convert the relatively inaccessible remnants of vital natural resources could never again be achieved through the simpler methods and equipment of earlier times. For the present, mankind has seemed to be performing an ecological high-wire balancing act in extracting and developing materials and energy sources to maintain its exploding, Malthus-deriding

PHOTOGRAPH COURTESY OF *Outdoor People*



PHOTOGRAPH BY JOHN R. SHRADER

Above, devastating results of acid drainage from a strip mine. Below, smoke billows from chimneys of a steel plant.

populations. But now a new, though related, hazard has mushroomed: global pollution of air, land, and water.

Pollution has become so much a part of our daily lives that many have come to accept it as the price for "quality" of living, when in fact it is a symptom of biological slum living. One begins to realize the extent of air pollution on discovering smog entering various national parks from population centers situated many miles away. The process of using up in only 100 years the trillions of tons of fossil fuels that took many hundreds of millions of years to accumulate in the earth's crust is establishing new ecological trends that may prove more difficult to control than atomic warfare.

When life was in an early stage of evolution, the primitive earth atmosphere contained a much higher percentage of carbon dioxide and a correspondingly lower percentage of oxygen than today. But the plant life of the earth transforms carbon dioxide into carbon and free oxygen through photosynthesis. Through the eons the plants gradually converted the atmosphere into the dynamic balance between carbon dioxide and oxygen that we have today. In so doing, the plants also locked up the carbon in the fossil fuels that we are now rushing to convert, for business and pleasure, into carbon dioxide again. Already a significant increase in carbon dioxide has been measured in the upper atmosphere.

The clearly demonstrated worldwide warming trends in the first half of the present century seemed to indicate that the carbon dioxide layer was trapping and holding, like a greenhouse, the heat rays resulting from the sun's radiation. The concurrently observed melting of the polar ice caps, it was feared, could eventually raise the sea level of the planet by 150 feet or more, if it continued. The cost, in taxes and in social upheaval, of relocating most of the world's major cities, all its seaports, and some entire countries, and the inundation of vast food-producing regions, cannot be fully imagined.

However, in recent decades another apparent result of increasing air pollution gives indications of overriding and perhaps reversing the greenhouse effect—the increasing accumulation of microparticle pollutants like smoke. These, unlike the carbon dioxide envelope, prevent more and more of the sun's rays from reaching the earth's surface in the first place. When this happens, the delicate temperature equilibrium of the earth is altered to permit snowfall to accumulate a trifle faster than the sun's slightly reduced radiation can melt it. This process has occurred many times in the prehistoric past when recurring flare-ups of worldwide volcanic activity ejected a dust screen into the upper atmosphere. These eruptions brought on the recurring ice ages. Commencing in the 1950's, winters have been getting colder, and it has been estimated that already the earth's annual mean temperature has dropped back to about what it was in 1850. An average reduction of only one or two degrees would be enough to alter radically the prevailing climate. These and related trends lead James P. Lodge of the National Center

for Atmospheric Research and Reid A. Bryson of the Department of Meteorology, University of Wisconsin, to believe that if the present rate of artificial air pollution by man continues, conditions favorable for the initiation of a new ice age will prevail by the year 2030.

In the present incomplete state of our knowledge it is impossible to forecast which of several ominous ecological developments may arrive first, because less money is spent on all ecological and climatological research than on cigarette advertising.

The pollution of soil and water by pesticide poisons may prove to be an even more imminent danger to the ecological health of the planet than a temperature disruption. DDT residues are now found in the tissues of animals almost throughout the world, including the Arctic and Antarctic, although no one knows how they reached such remote places. We do know, however, that DDT and other still more powerful chemical relatives have greatly diminished some populations of insects that are beneficial to man as well as the harmful ones; even the butterflies, which were abundant in open fields before World War II, are generally more scarce today. At the same time, through natural selection, DDT has produced genetic strains of harmful insects that are largely immune to this and other poisons. DDT has reduced dangerously the fertility of many species of birds, including the American eagle, our national symbol, and probably mammals as well. It is now stored in livers of nearly all human inhabitants of countries touched by "progress," though seemingly not yet in sufficient quantity to curb human fertility.

Obviously, applications of these poisons have greatly reduced insect-borne diseases in many impoverished countries. But inasmuch as this program to reduce the death rate has not been matched by a program to control the birth rate, the exploding populations face starvation, war, and related miseries that will afflict the sick and well alike.

Some ecologists and oceanographers now fear that the unchecked drainage of pesticide pollutants from continental land masses could poison the food supplies of the world's oceans at a time when nations are looking more and more to the sea for supporting their populations. Moreover, these scientists fear that pesticides eventually may interfere with the ability of oceanic plankton to convert carbon dioxide into oxygen. Thus, while we replace more and more oxygen-producing land vegetation with housing and industrial complexes, we may, if we do not become sufficiently concerned, also impair the oceanic production, which accounts for about 60 percent of total world production.

In short, application of pesticide pollutants, instead of more sophisticated and less injurious methods of ecological control, produces more wealth and political advantage for a time for a few, but it is a biological blind alley. One conservationist, anticipating Rachel Carson by five or more years, considered present chemical pesticides a greater long-range threat to humanity than The Bomb.

And now we hear of hopes for weather modification for local economic benefits! If carried out with sufficient ecological blindness and a disregard for the needs of others, this practice could be as ruinous as unchecked pollution.

From this brief glance at the global ecological outlook it becomes clear that we can continue to drift, multiplying our world populations, world strife, and world pollution and calling it "progress." Or we can use our minds and hearts, which we claim are superior to those of lemmings and rabbits, to develop global ecological goals and ethics based on a logical extension of the Golden Rule. Someone has said, "We have feared, fought, conquered and embalmed Nature; we have tried everything except love and foresight."

If we should resolve to preach and live by this realistic and ethical concept—that mankind is part of the ecological community, with responsibility for its safekeeping—our leaders, educators, and planners will have to adopt a somewhat unaccustomed humility and reverence toward natural values. The guidelines of our civilization then will have to include restoration and maintenance of the total earth community as a top priority, ahead of landing on the moon.

Concern for and cooperation with the entire family of man and all of the global ecological community clearly offers the only realistic hope for man's survival and evolution toward a more mature level of civilization. Accordingly, the role of the world's national parks takes on a still deeper significance than in the past.

It has long been said that the parks relieve tensions, deepen reverence for nature's grandeur, restore one's perspective and sense of values. Likewise it has been emphasized that the parks have irreplaceable value to science because they offer relatively natural environments where ecological processes can be studied as they unfold free from man's usual interference. Out of this realization, park authorities have increasingly come to perceive their unique responsibility for the ecological health and integrity of the parks, in addition to operating them as fun places. This is a first step in administrative application of the Golden Rule.

Mounting concern for the ecological health of the planet now further underscores the importance and basic rightness of the ecological management philosophy that has been evolving in the parks. And it becomes increasingly clear that this concern for the welfare of the land must reach outside the parks to encompass all land—of the local community, the nation, One World.

Does this concept seem utopian? All suggested improvements in man's viewpoint or ethics at first appeared to many to be silly dreams—or worse. What eventually brought them to fruition was a gradually increasing conviction, championed first by a minority, later by a majority, that "Something like this has got to come."

In summary, the role of the national parks has been that of a pilot experiment in mankind's development of more mature attitudes and behavior toward the earth upon which he utterly depends. We are learning to love and take better care of our national parks, for their own sake, instead of using them up for transitory profit or nonconforming kinds of fun. In like manner we must now learn to love and cherish our country, our world, and those that dwell therein.

GRAND CANYON

THE WORLD BELOW THE RIM

DONALD E. WEAVER, JR.

Last year over 2 million visitors gazed in stunned disbelief at the pastel immensity of the Grand Canyon. Of this throng, only a small portion ventured below the overdeveloped rim areas. The majority of those who did either walked or rode a mule down the Kaibab or Bright Angel trails to the plush oasis at Phantom Ranch. Most of the remaining visitors to the depths of the canyon traveled the easy trail to the onetime Shangri-la of Havasu. Here below red cliffs a few families of Havasupai Indians eke out a meager existence by packing tourists into their canyon home.

The controversy over the proposed construction of two dams in the Grand Canyon brought to the attention of the public many aspects of this unique natural wonder. However, many of the matchless features endangered by such development are still unknown to the public. The dam builders maintained that only a few thousand people—well-heeled river runners—ever see or "use" the inner canyon, the desert world below the rim; that inasmuch as maintained trails into the area do not exist, it is impossible for anyone to actually experience wilderness in the Grand Canyon by backpacking, hiking, or walking. The lakes created by the dams would open the area to all Americans, so the developers claimed.

I have never run the Colorado River, but I have hiked into the Grand Canyon many times. My footsteps have followed the dozens of unmaintained trails that penetrate the depths of the canyon. Originally constructed by miners and promoters, these trails are relatively unknown except to canyon buffs who spend endless hours, days, and weeks searching out the old routes. Each time I enter the canyon, I try to visit a new area or find something I have never seen or experienced before. I have succeeded, admirably. Let me take you on a short, quick tour of the world below the rim, my Grand Canyon.

From the viewpoints on the South Rim, the inner canyon seems arid and desolate. In many respects, this is true, but it is not the complete picture. The Tapeats Creek–Thunder River–Deer Creek area of the Grand Canyon is a land of thundering cataracts. Located on the north side of the river, the area is well watered, laced with cold, raging streams. Cottonwood trees, tules, and other water-loving plants line the streams. Birds and animals often come to the streams to drink.

During a spring visit to Deer Creek, I watched, fascinated, as a small slate-grey water ouzel moved nonchalantly over the water-splashed rocks almost directly beneath roaring Deer Creek Falls. Intently he searched the cold, clear water for insects. Once, the bird lost his tenacious grip on the slick rock and fell sideways into the cascading torrent. A few moments later, apparently none the worse for wear, the dipper was perched on the same moss-covered rock, emitting a few cheerful notes of song. His lilting melody was almost completely lost in the deafening boom of the falls. The small bird didn't seem to mind. After a few bobs of his chubby little body, he jumped into a shallow portion of the stream and again began searching for his supper. He seemed completely oblivious to me, watching just a few feet away.

ALL PHOTOGRAPHS BY THE AUTHOR

Water ouzel

Deer Creek Falls

Sculptured valley of lower Shinumo Creek

Deer Creek and the gloomy lower gorge

Deer Creek Falls and Deer Creek, with its dark lower canyon, are easily accessible to river parties. To the hiker and backpacker, the area is more remote but still within reach. A short 2-mile detour, west off the Thunder River Trail, ends at cottonwood-lined Surprise Valley, where Deer Creek emerges from its underground passages.

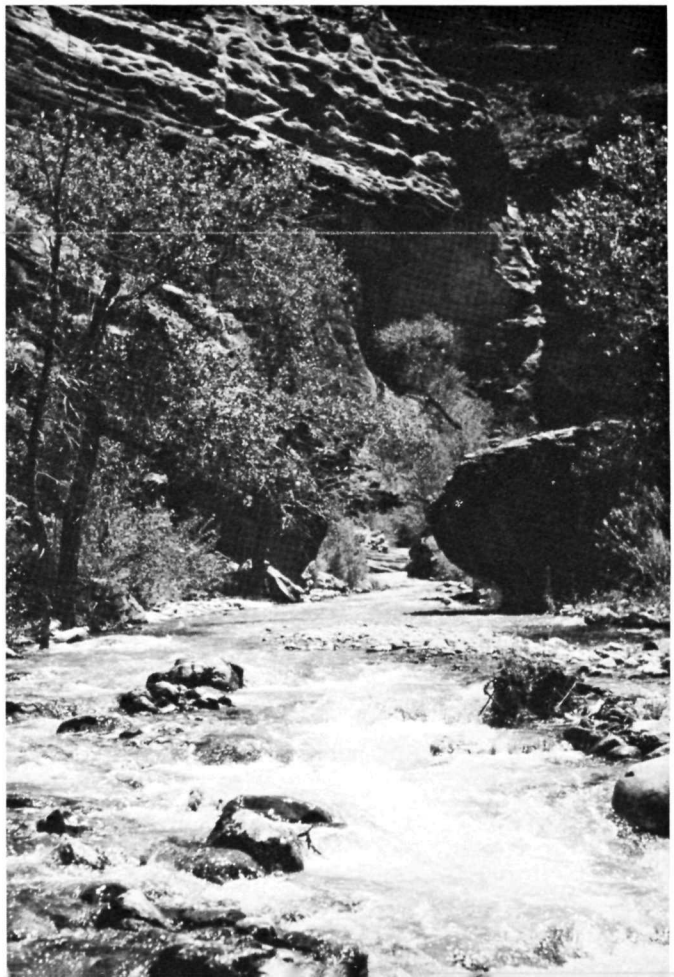
Thunder River and Tapeats Creek are accessible via the Thunder River Trail, maintained by the rangers of the Kaibab National Forest. Here amid rushing white water and towering cliffs, the sportsman can try his luck and skill against huge trout. Tapeats Creek, surging, wild, is one of the few remaining trout streams in Arizona.

For the more adventurous, the caves and caverns of the area provide real underground thrills. Tapeats Cave, located at the very head of Tapeats Creek, is filled with interesting and unusual formations. A few years ago I spent two days exploring its intricate, wildly decorated passages. The spring run-off from the high forested plateau of the North Rim was very high that year, and many of the normally dry passages were flooded. I shall not soon forget swimming through ice-cold water hundreds of feet underground.

Kanab Creek, just west of Deer Creek, is one of the largest and most interesting tributaries of the Colorado River in the Grand Canyon. In its lower reaches, the walls of Kanab—wrinkled, salmon-pink—rise unbroken for thousands of feet. Unusual pinnacles with picturesque names, such as Scotty's Tower, jut skyward. Small side

Thunder Falls. The river emerges from an underground cavern and plunges over a towering cliff

Tapeats Creek near its junction with Thunder River



canyons, adorned with delicate monkeyflowers, contain innumerable enchanted pools and delicate waterfalls. On one trip into Kanab Canyon, I surprised a large band of desert bighorn sheep. They raced up a perpendicular wall and then posed for me on a rock projection hundreds of feet above the gentle stream.

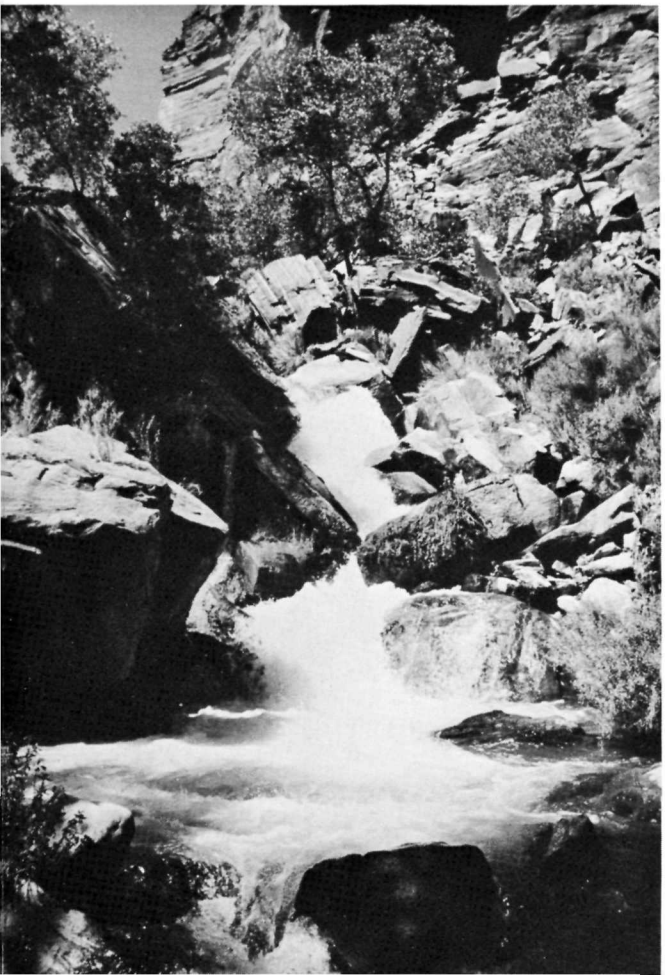
In Kanab Canyon I visited one of the most beautiful spots I have ever seen. A friend of mine, Dewey Wildoner, named this spot Whispering Falls. A small ephemeral stream glides noiselessly down a steep ramp, over a hundred feet high, into a deep emerald-green pool. The pool is engulfed on all sides, except for a small slot, by towering brown cliffs. Small droplets of water, falling from high above, create intricate patterns of ripples on the wide expanse of clear, cold water. Moss, ferns, and other water plants flourish along the edges of the pool and the small stream that overflows into the miniature canyon below. Tucked away in a small side canyon, the spot showed no evidence of previous human visitation or desecration. I hope it remains that way.

To the east of Tapeats Creek lies the huge sculptured valley of Shinumo Creek, named for the Indians who once inhabited the area. Beneath awesome Holy Grail Temple, turbulent waters rush to the Colorado River, leaping over Shinumo Falls just before reaching the river.

I remember encountering a sunning rattlesnake. He was a big fellow, healthy, pugnacious, and well fed. I gave him a wide berth and vowed to be more careful in placing my feet. Later that same day I discovered a kingsnake, mortal

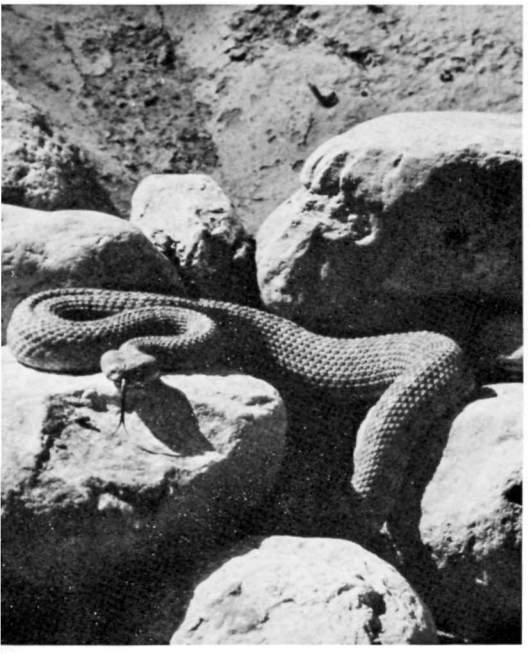
Scotty's Tower in Kanab Canyon

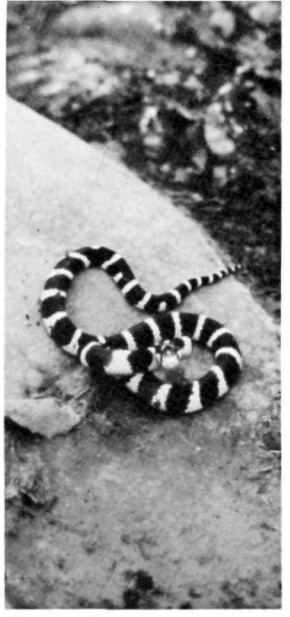
Crashing falls of upper Tapeats Creek



Whispering Falls and the emerald pool below

Rattlesnake sunning near Shinumo Creek





Kingsnake

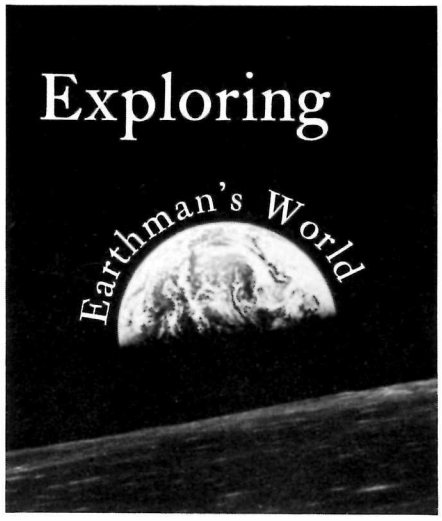
enemy of the rattlesnake, hunting toads in almost the same spot. I often wonder whether these two natural enemies ever met and fought.

Animals are always fascinating, especially the larger species. Desert bighorn sheep, deer, and even wild burros frequent many areas of the Grand Canyon. I recall being awakened one night by a great deal of commotion, stamping, and breaking of brush. The next morning I made breakfast and broke camp under the watchful eyes of four wild burros. They kept me under surveillance while munching the damp green grass just across the tiny stream from my camp. The burros did not seem too perturbed by my presence, and just before I loaded my pack, they nonchalantly ambled on down the canyon and out of sight.

The Grand Canyon evokes many images to visitors. To me, the Grand Canyon is a vast desert wilderness. The inner canyon, the world below the rim, is witness to the gentle beauties of life and the harsh realities of the struggle for survival. It is a tiny white-throated swift soaring gracefully above the turbulent rapids of the Colorado River. It is a watchful bighorn ewe leading her young to pastures among the towering cliffs. It is the quiet stealth of a kingsnake stalking unsuspecting toads. It is nature, undisturbed—I hope forever. ■

Shimmering pool in Scotty's Hollow, a tributary of Kanab Creek

Mouth of Middle Fork, Salmon River



with DARWIN LAMBERT

Earthmanship

In this issue we begin a series of short articles by thinkers in a wide range of disciplines who will examine various aspects of man's relationship to nature. The series will, we hope, stimulate thought and indicate routes toward developing the kind of man-earth relationship that will lead to creative ecological harmony, thus operating and preserving our planet as a physically and mentally healthful abode for all life. —E.H.C.

Not just youth but man is in an identity crisis. Major problems can't be conclusively solved until we decide anew who we are, where we're going, and why. I've begun seeing myself as a budding earthman, my older identities fading or becoming subsidiary.

What do you mean—earthman?

Body, mind, spirit, environment—all one package. It's an integration, a symbiosis with the planet, a citizenship in the universe.

If you're a budding earthman, what about the rest of us?

Speak for yourselves. Some are New Yorkers or Californians, say, first of all. Some are primarily businessmen; others, chronic consumers. Some see themselves as members of one particular generation or another. But many are budding earthmen now, consciously or unconsciously. We feel that an art or a dedication that might be called earthmanship—to enhance instead of degrade our planet's life system—has risen to the top of man's relevancy list. We're altered by overcrowding, social and political frustration, violence, pollution, misuse of land, acute chauvinism, overconsumption contrasting with limited earthly reserves, refusal by so many young people to accept the present civilization's habit-patterns, inability of numerous others to act upon warning intuitions or fact-based indications that our course is toward what we won't like and may not live through. We're concerned about worsening alienation (that feeling of disconnectedness from the center of meaning and power, which either paralyzes or plunges its victims into destructive rage or rapid motion toward no goal).

Somewhat paradoxically, exploration of space has speeded our understanding of ourselves and our planet. We've seen vicariously what Frank Borman called "one world . . . a grand oasis in the vastness of space." There's been a flash of recognition: Why, that little ball out there is our home, *us!*

So?

Don't you see? It's a new view cutting across man-generated chaos. It makes our situation startlingly clear, maps again the almost-lost route to survival, highlights new clusters of opportunity, through truly needed achievement, by diverse personalities who've been succumbing to uselessness, absurdity, boredom, despair.

Are you saying the earthly frontier isn't gone, after all?

Right. It's merely reversed itself. Man's coming thing is to retake the technologically oppressed and alienated territory and use modern knowledge to establish earth-connected order on a more healthful and enjoyable level than previously known.

Earthmanship is anti-city, anti-industry then?

Not at all. Because cities and technology, or parts thereof, have proved capable of being either helpful or hurtful, it

urges careful diagnosis and corrective action where needed. It is pro-nature, pro-earth, but it sees cities as natural, say, as anthills and man's industry as earthly, say, as beehives. Both man and bee gather materials from earth and transform them by technology.

Earthmanship may be seen as springing from a marriage of conservation with world citizenship, or of Thoreauvian thought, with the unifying enthusiasm of Whitman, or of nature and man, of earth and the human world. It's not to become a set of no-no's but an affirmation of life, an action-way forward. It won't downgrade man. Nature comes up to our level, permeates us, *is* us. Through us or otherwise, nature is likely to rise even higher.

If we had to hold all the needed earthmanship consciously, or even in computers, we'd find it as complex as the sciences and the humanities combined. The hope is in reawakening the earthmanship already latent in our depths, connecting it a bit at a time with earthmanship consciously worked out, then letting the combination move back, habit by habit, into unconsciousness—to operate for the most part as the built-in attitude of a truly advancing civilization.

I'm afraid you'll lose me unless you give specifics.

Fair enough. One facet of earthmanship has already been widely accepted, partly through decades of earth-based study, partly through likening earth to a capsule in space. Our planet may support billions of humans, the Apollo spaceship but three; yet each has only its own resources, no more (except sun-energy). Leaving aside the obvious parallels of water and air—which must be conserved and kept healthful—consider food. Experiments for space flight have included tiny greenhouses to produce otherwise unavailable, quickly perishable life-essentials (as watercress, say, or spinach) on ion-exchanging resins simulating soil. But such production, as on earth itself, is restricted to the amounts of soil nutrients and catchable sunlight for photosynthesis, the basic productive process—for food, either vegetable or meat, as also for coal, petroleum, or fibers. Facts of this kind gathered through persistent research add up to the science of ecology, which now is telling us we're damaging our environment, ourselves, and our future—perhaps fatally.

I can hardly be unaware. So why don't we reform?

Oh, we do—often. But too little, too late, too shakily—which brings us to a different major facet of earthmanship. What can jolt or inspire individuals and societies, the whole world, sufficiently to change direction as well as detail? Not facts and practical advice alone, experience proves, especially when they cross long-entrenched counter-pressures. Earthmanship would mobilize not only reason but the deeper drives, and not merely self-and-species-preservation but the need to be needed, the wish to belong to something lasting and greater than ourselves, the love of home, the reach for religion.

Earthmanship isn't merely an additional task to take on. It's new feeling, thinking, living. It would fit the recent great advance—new conservation or environmentalism—into the living process of our planet. Environmentalism may be seen as good for our health—essential, in fact—yet in the current context it frequently represents denial, the negative. But earthmanship moves the point of view and may become, to use the vernacular, fun—relevant action with newly valid incentives taking over from older games such as rat-racing aggrandizement that now tend to lose their savor or generate resentment.

Darwin Lambert, formerly a newspaper editor, is now a freelance writer with several books and many magazine articles to his credit. A trustee of the National Parks Association, Mr. Lambert makes his home on the western slope of Virginia's Blue Ridge range not far from Luray.

I'm afraid I don't fully understand.

Patience, please. I see earthmanship as a generalist. It needs discussion by specialists, too; and some who will participate in this series may choose to clarify or criticize, or present quite different ideas and information, Earthman's World being by preference a diverse place. We hope to hear from ecologists; behavioral scientists; artistic, literary, and philosophical types; students; and others. These short articles are projected, however, as mere teasers toward understanding. Perhaps they will stimulate thorough presentations that go on from the who-where-why to the when-how, leading more directly into action.

It'll be half past time! What kind of action anyway?

Man-earth harmonizing. It's already developing as a pragmatic task—while its significances ferment, toward opening more channels for expressing love of earth as home, toward growing respect for the body and realization that there's a most satisfying optimum of physical work (not mere exercise) somewhere between drudgery and ease, toward projecting a standard of living not forever tied to volume or dollar-value of consumption. The fermentation might reduce our ingrown despair along with our self-adulation; might establish a land ethic as part of an on-going, earthwide, art-science-religion symphony; might advance to reverence for life and on to reverence for that still unfathomed reality behind all, including life.

The growing enjoyment of scenery, national parks, wilderness, wild creatures, and plants operates significantly here. So do earth-fitting architecture and landscaping, all manner of identifications with aspects of earth. Continuing flashes of home-recognition from space multiply and consolidate their effects.

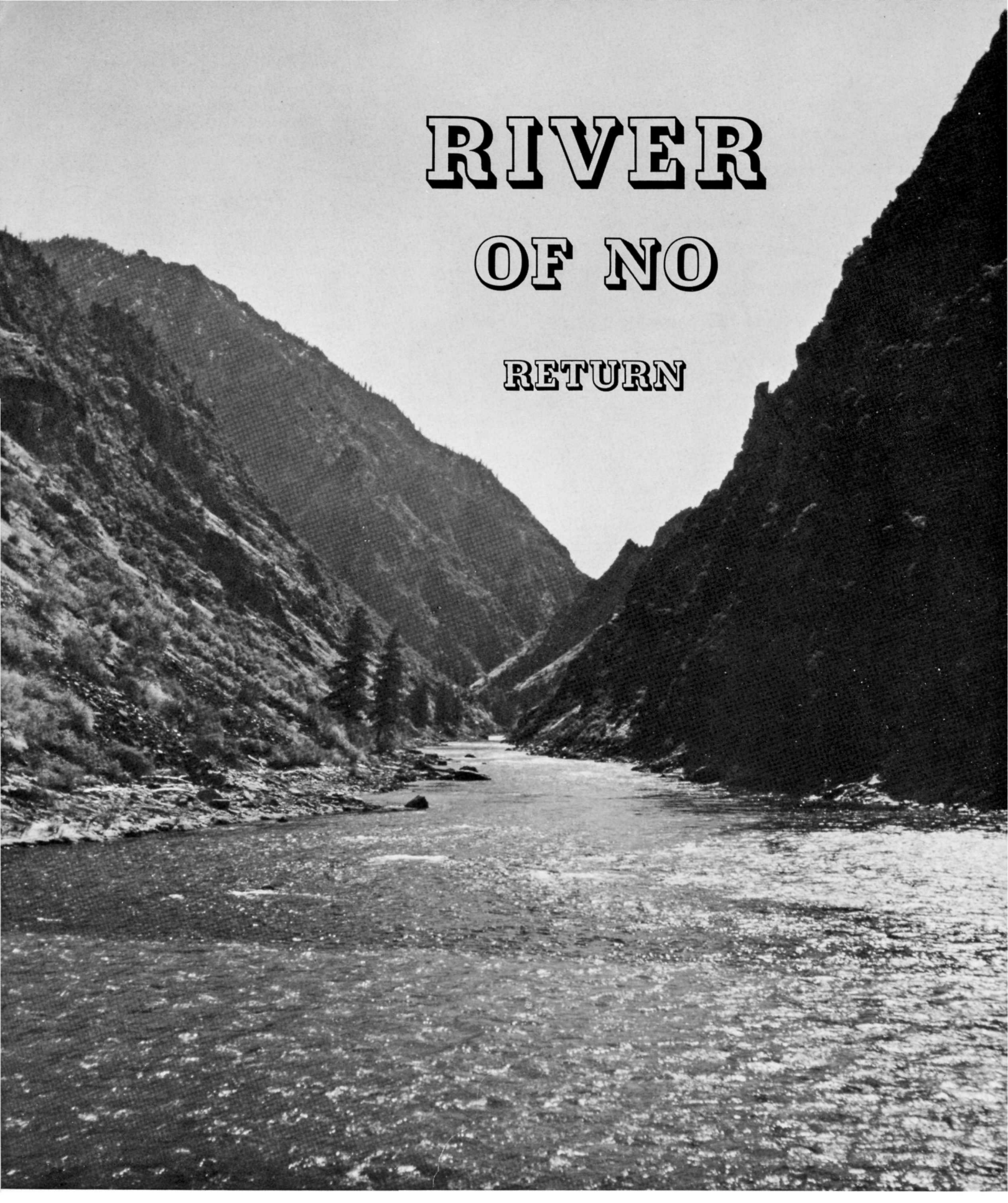
It's largely a question of how much of the real unity man can grow to comprehend and cooperate with. An earlier budding earthman, Walt Whitman, wrote:

When the full-grown poet came,
Out spake pleased Nature (the round impassive globe, with all its shows of day and night), saying, *He is mine;*
But out spake too the Soul of Man, proud, jealous and unreconciled, Nay, *he is mine alone;*
—Then the full-grown poet stood between the two, and took each by the hand;
And today and ever so stands, as blender, uniter, tightly holding hands,
Which he will never release until he reconciles the two,
And wholly and joyously blends them.

Dipsea

Once upon a time
Somebody asked me
What is there to see
After you've parked the car.

Florence & Jerome Lewis
El Cerrito, California


RIVER
OF NO
RETURN

STEPHEN F. ARNO

FIFTEEN YEARS AGO Hollywood produced an inspiring musical theme with the lyrics "Gone forever, down the River of No Return." At the same time events were taking place on Idaho's Salmon River that soon would warrant its epitaph, "Gone forever is the River of No Return."

Even back in 1805 when Lewis and Clark reached eastern Idaho's Salmon Valley, the river surging westward, and the jumbled mass of peaks that it dissects, had earned a formidable reputation. The Shoshoni Indians told the explorers of violent waters and steep-walled gorges. Apparently unconvinced, Clark himself made a reconnaissance down the Salmon from North Fork. He was forced to turn back after 14 tortuous miles, yet he had not even begun to penetrate the rugged stretches of the Salmon.

By the 1890's two resourceful men had explored the rapids and become professional river runners. This team, Guleke and Sutherland, floated miners, trappers, and supplies on wooden flatboats, threading their course through treacherous waters and mile-deep canyons. Man had learned to ride the river downstream, but he had not yet found the means of coming up it. Inasmuch as this was the "River of No Return," a new flatboat had to be constructed for each trip. The boats were dismantled downstream at their destinations, and their lumber was used for building material.

Mineral pickings were rather slim in the wilderness canyon of the Salmon River, but big game has always been abundant. So the turbulent river was lined with cabins and camps during the depression of the 1930's, and scores of sturdy backwoodsmen spent those lean years living off the country and on what they could buy with the 30 to 50 cents worth of gold dust they could pan in a day. Some residents of the canyon are still largely self-sufficient, raising bumper crops of corn, peas, potatoes, tomatoes, watermelons, and so on in small gardens. Bighorn sheep was the favorite meat of the Indians and early woodsmen, hence the names of landmarks such as Sheepeaters Mountain. Some of the depression refugees stayed on; white-bearded oldtimers still live along the tumbling waterway, but now the Salmon's wildness and pioneer heritage is a fading memory.

Following World War II, rubber rafts replaced the wooden flatboats, and more and more outdoorsmen and their families took to floating down the Salmon. Still, even early in the 1950's the only means of travel were those employed by explorers and prospectors a century before. But this environmental rapport could not endure. Man's advancing technology could not be turned aside simply to save the "River of No Return."

In 1952 for the first time one of humanity's roaring motorboats crashed upstream over the rapids, through the primeval canyons, *up* the River of No *Return.* Within a few years, two powerboat-outfitters had begun a shuttle ferry service for fishermen and tourists. Now several outfitters use jet boats (about 200 to 400 h.p.) and powerful outboard craft (often with twin 100-h.p. motors), so the magnificent canyon resounds with engines, and a canyon hiker can even breathe the gas fumes of progress.

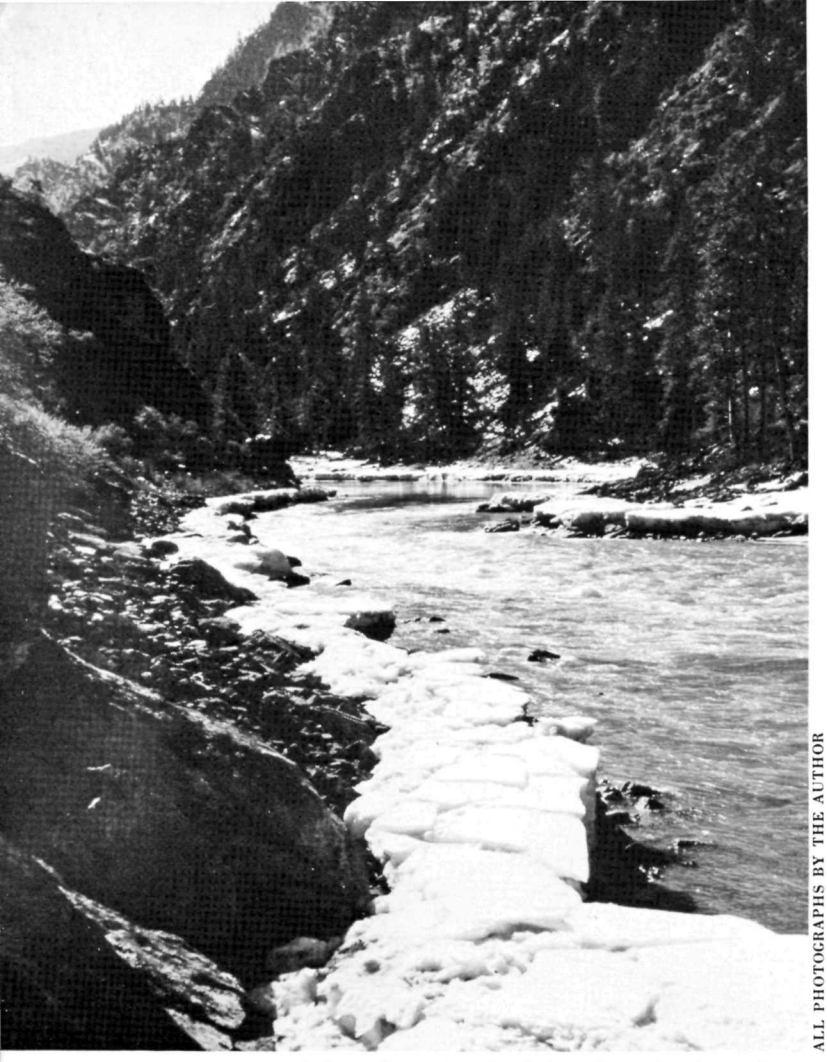
The impassable Salmon River gorges and peaks effectively separate east central Idaho from west central Idaho. The name "River of No Return" now applies to an 80-mile roadless and partly trailless stretch of the Salmon between roadheads near the settlements of North Fork on the east and Riggins on the west. Until the Lewis and Clark highway was opened in the early 1960's, the shortest overland driving distance between the two ends of the River of No Return was an incredible 583 miles, and even via the new highway it is 355 miles.

Although the Salmon traverses remote terrain, the waterway has long held national attention. The *Columbia Encyclopedia* (Columbia University Press, 1967) gives a typical account of the Salmon:

> The river's canyon, c. 1 mi. deep and 10 mi. wide in some places, threads through a wilderness preserve. In 1935 a party sponsored by the National Geographic Society explored the canyon. Though the swift waters and rapids are navigable downstream, it is impossible to return by the water route, thus giving the Salmon the name River of No Return.

The wilderness canyon is only 2,000 to 2,900 feet in elevation along the river, and numerous peaks and ridges on both sides rise above 8,000 feet. The rugged terrain is a mosaic of cliffs and rocky breaks along with somewhat gentler slopes of grassland, shrubland, pine savannas, and forests on a great variety of exposures and altitudes. This diversified natural environment provides year-round habitat for elk, mule deer, bighorn sheep, mountain goat, cougar, black bear, golden eagle, and other animals. The bighorn herd of the Salmon River Mountains is one of America's largest concentrations of that species. In spring and fall the river is a migration route for steelhead—huge, ocean-going rainbow trout.

Down in the canyon, winters are milder than in any other area of the Northern Rockies. Spring comes nearly a month



ALL PHOTOGRAPHS BY THE AUTHOR

Salmon River 8 miles below Corn Creek roadhead

Steelheaders in high-powered outboard craft on Salmon River

earlier than even at relatively temperate Missoula, Montana. Three species of colorful wildflowers—sagebrush buttercup (*Ranunculus glaberrimus*), yellow bells (*Fritillaria pudica*), and spring beauty (*Claytonia lanceolata*)—are in full bloom by March 20, and the current bushes are leafing out. By this time new shoots of bunchgrass are already a few inches high, and the big game is already climbing onto south-facing slopes high above the river.

On his first visit to this enchanting Salmon country a biologist might wonder why it was not made a national park. It might well have been if conservationists had "discovered" it earlier. But, in retrospect the naturalist might sigh in relief that the River of No Return has not attracted the crowds it would have as a national park, for this is an especially fragile natural area.

The attraction is centered on the 80-mile roadless stretch of water that occupies a narrow, granite gorge, with little screening from sights or sounds. Contrast this with Grand Canyon where the attraction areas are the broad canyon rims. Or compare the River of No Return with a more conventional tract of mountain wilderness, say 80 miles long by 40 miles wide. Such a land-oriented natural area allows for dispersion of hikers, fishermen, hunters, mountain climbers, horseback riders, and others into a few thousand square miles of terrain. However, the Salmon attraction has only the linear dimension, so all the use and disturbance is concentrated on just a few square miles.

Local resort owners and powerboat operators are enjoying the recent surge of business, and they advertise vigorously to attract even more tourists. A local forest ranger estimates that roughly 90 percent of the burgeoning summertime use now is by out-of-state visitors, largely Californians. The potential impact of visitation in the narrow canyon is staggering. Turnouts and camping spots along the road from North Fork are already congested each spring and heavily used in most other seasons.

A few dozen powerboats roar up and down the river now. If business continues to expand at its present rate for several more years, traffic lights might have to be installed at either end of narrow rapids, and the drone of engines may fill the canyon almost continuously, perhaps even at night. A biologist might ask, how will this heavy use affect such already endangered species as the osprey and golden and bald eagles, which have lived and fed along the Salmon for thousands of years? Will conservationists of the future cite the Salmon as an example of how man crushed a delicate flower of wilderness?

Is there no hope for saving the natural environment of the River of No Return? Except for several small inholdings that arose on old mining claims, the U.S. Forest Service administers the entire area. The agency is studying the river and no doubt will recommend that large portions of it be protected under the Wild Rivers Act. The Forest Service has already withdrawn from mineral prospecting most of the areas where creeks enter the roadless portion of the river. Potable water and gentler terrain along such stream junctions make them potential key sites for resorts and other recreation. The Service has also been buying out some

of the current inholdings. Most of the permanent resort buildings along the River of No Return will be replaced by tents within the next 3 years in order to conform with Forest Service wilderness policy.

However, the Forest Service feels it cannot limit the growth of powerboat fleets on the river, and by the time the agency's Wild River recommendations are finalized (about 1972), the powerboat-resort interest will be larger and more firmly entrenched than it is today. This commercial interest is already a potent political force in the state government of Idaho, and the state probably will have ultimate authority in managing the River of No Return. Despite the fact that the entire Salmon region was put into forest reserves near the turn of the century, the individual states control use of their "navigable waterways."

A court case will be necessary to determine whether the Salmon should now be classed as a navigable river. Such a decision is badly needed to resolve whether Idaho or the Forest Service has jurisdiction below the high-water marks. Until this question is settled, the river and its shores are a no-man's-land for resource managers. A commercial outfitter and a private resident are currently using houseboats to avoid regulation by the Forest Service.

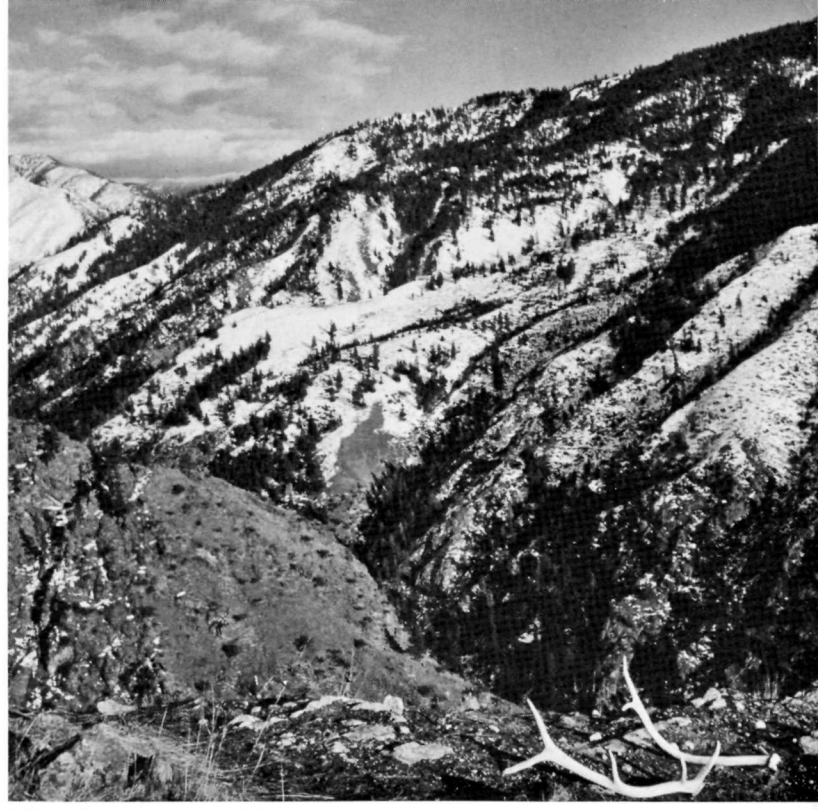
Idaho's Water Resource Board has been allocated $100,000 to help plan management for the roadless Salmon as a Wild River. The state should act vigorously to stop the current flow of sewage into the River of No Return, and it may have to take politically courageous actions if it hopes to protect the Salmon from overuse.

Compounding the Forest Service's difficulty, its jurisdiction along the River of No Return is divided between two regional offices—Missoula, Montana, and Ogden, Utah. Coordinated planning for the Salmon is further divided among four national forests—the Bitterroot, headquartered in western Montana; the Salmon, headquartered in eastern Idaho; and the Nez Perce and Payette, headquartered in western Idaho. One fortunate aspect is that there is apparently no important timber, domestic grazing, or mineral resources to consider. Instead, the management controversy will be intensive commercial recreation versus wilderness. There is little interest in extending the present roads, which currently parallel most of the Salmon's course except for the 80-mile River of No Return.

Those who favor intensive, motorized recreation for the River of No Return can point out that the nearby Middle Fork of the Salmon River has already been set aside as a Wild River with no powerboats allowed. The Middle Fork provides 155 miles of rafting, and some of the outfitters who use speedboats on the main Salmon also conduct rubber-raft float-trips down the Middle Fork. The logical question is, "Just how much wilderness river is necessary?"

The rocky canyon along the lower reaches of the Middle Fork has an environment much like the River of No Return, although this tributary is small compared with the main Salmon. A few dozen miles upstream the Middle Fork lies above 4,000 feet elevation; thus it has mountain winters, and the upper 100 miles is a "mountain stream" with a setting different from the River of No Return.

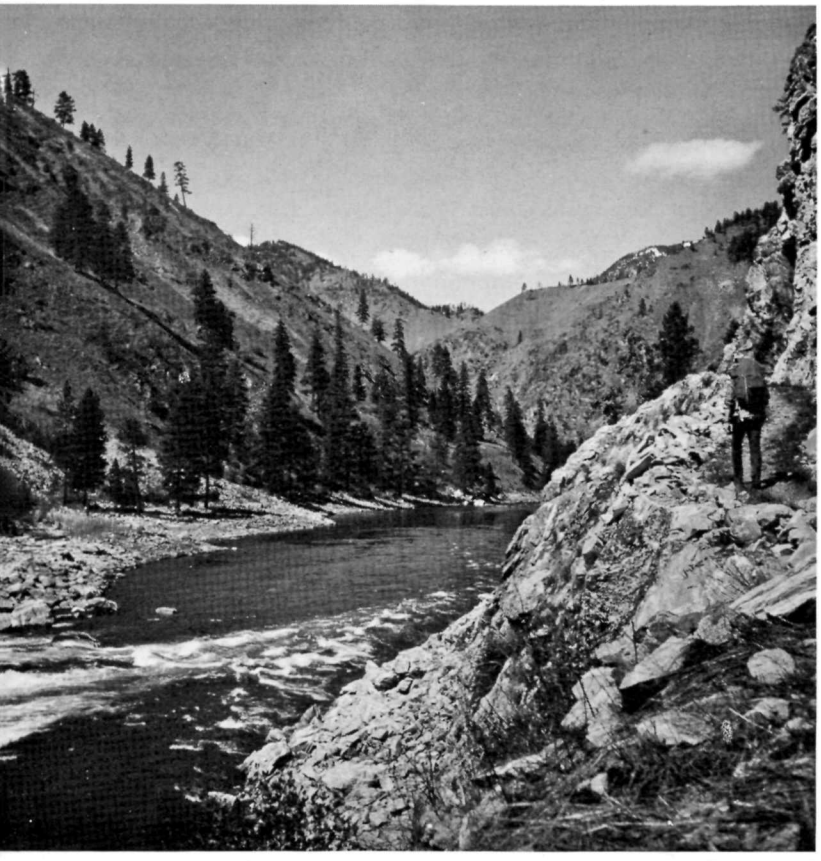
Congress has recognized that free-flowing, undeveloped rivers with natural surroundings are rare even in the American West. In 1968 Congress passed the National Wild



Elk bed above Salmon River

Bighorns on ledge above Salmon River

Author with golden eagle apparently shot from a boat along Salmon River



Salmon River trail

CCC Horse Creek pack bridge

and Scenic Rivers Act, which designated the Middle Fork as one of eight rivers in the nation to receive immediate protection as a "Wild River." This act also designated the main Salmon from North Fork to the Snake River to be studied as a potential addition to the Wild Rivers System. The roadless River of No Return clearly fits the Act's description of a "Wild River," which would be preserved as a "vestige of primitive America." Presumably that would mean without an armada of powerboats, resorts in every cove, and so on; but the Act does not specifically rule out such development.

The Forest Service recognized the Salmon's wilderness values more than a decade ago when it included over half the River of No Return in the Salmon River Breaks Primitive Area on the north shore and Idaho Primitive Area on the south. But, if mass recreation prevails, the Service will probably not be able to include the river and the adjacent portions of the primitive areas in the Wilderness Preservation System. Because of the easy transportation by powerboating and floating the river, hiking in the canyon is almost unheard of. This is the case despite the fact that foot travel is an inexpensive, unregimented means for carefully exploring the canyon, for observing in detail and photographing the vegetation, wildlife, and geology. Why save a wilderness that even most wilderness enthusiasts prefer to ride past?

Most of the present powerboat use is to carry steelhead fishermen to remote pools on the river. These anglers pay an average of $30 per day for the shuttle-ferry and lodging service. An observer might conclude that they have little need of the wilderness environs except that its present remoteness may enhance fishing success. The intensity of discarded beer cans and other streambank pollution that sometimes attend this use seems to confirm the "unimportance" of the spectacular setting. However, some operators do help clean up shore debris. (One occupant along the Salmon below North Fork seals his garbage neatly in a large plastic sack and then throws it in the river. The ranger at Lantz Bar found a dozen such rancid parcels on his beach.)

About half the steelheaders use the jet boats, whereas the other half come in pickup trucks and autos to fish along roaded portions of the river. If powerboats were restricted from the roadless River of No Return, theoretically they would still have over 150 miles of the main Salmon to use. However, most of that portion has roads, so there would be no market for expensive boat transportation.

Many rivers along the Pacific Coast have bigger steelhead and a much greater abundance of these fighting fish. Even Idaho's Clearwater River provides steelheading as good or better than the Salmon. Nevertheless, convincing advertisements and word-of-mouth communication bring throngs of hopeful steelheaders to the Salmon. The same information media might well cause wilderness enthusiasts eventually to "love the Salmon to death" if the River of No Return were designated for primitive use only. In the face of America's 203,000,000 population and its tremendous, rocketing demand for all sorts of recreation areas, rare and splendid natural environments like the River of No Return can probably be spared only by what might superficially appear to be "conservation for conservation's sake."

Of course, all use must not be prohibited, but use by any group, including "wilderpurists," should be kept from damaging the fragile natural setting. Otherwise the Yosemite Valley syndrome (overuse by humans) is sure to set in and fester.

Perhaps limiting use is a measure too drastic for us, and after all, the alternatives sound so much better. "Why not open up the wilderness so that everyone can use it?" This policy seems more democratic, like "the greatest good for the greatest number of people"; and by not imposing limits or regulations, we could emulate the freedom of the pioneer era that we associate with wilderness use.

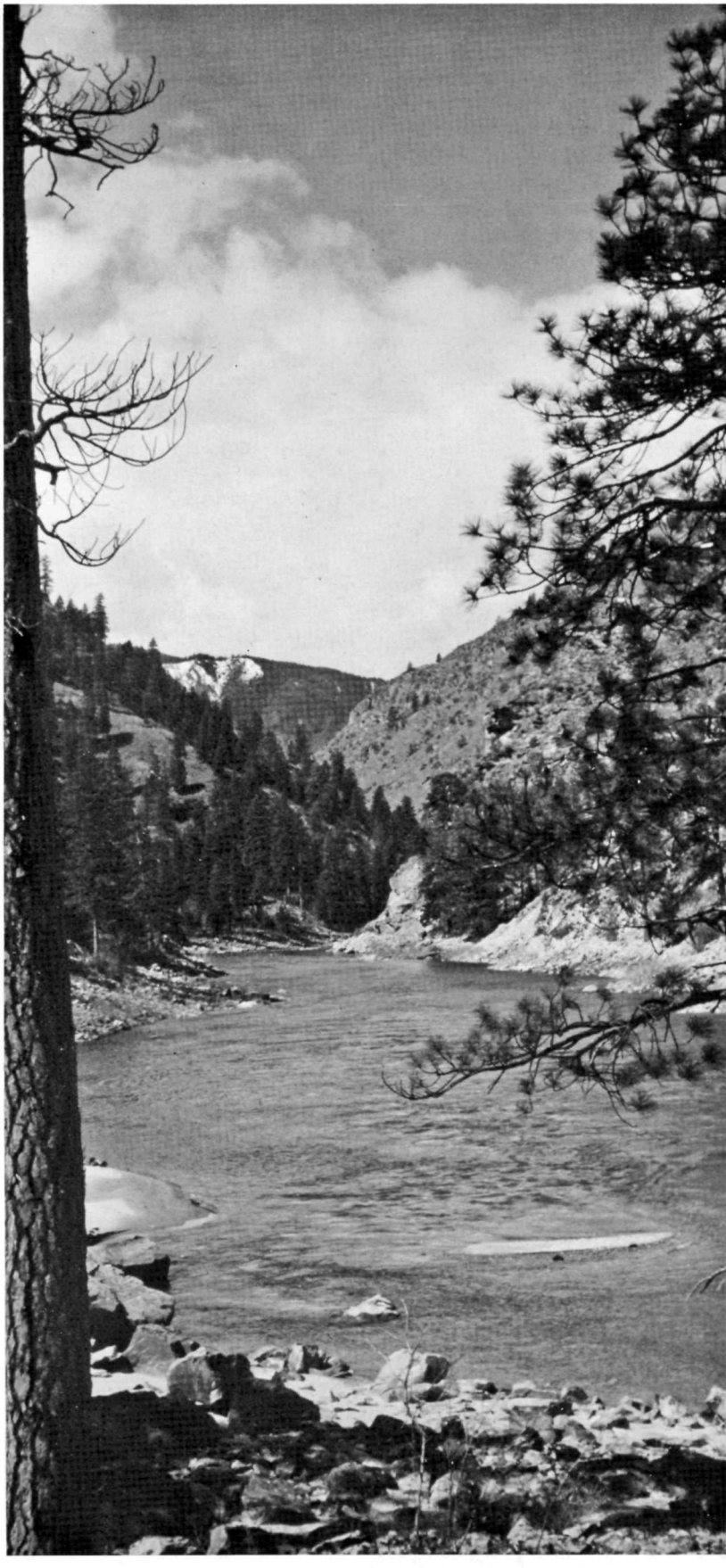
The trouble is that when the policy is "anything goes" in a natural area, then "everything goes." The pioneer philosophy of taming the wilderness may have been appropriate two centuries ago, but now there are *thousands* of times as many people who want to "use" the remaining *2 percent* of American wilderness. Moreover, just as powerboats cannot compete with roads on the Salmon, wilderness cannot coexist with throngs of humans or with machines.

By definition a wilderness must be capable of providing a high-quality experience in the natural outdoors, far removed from the sights, sounds, and smells of civilization, and with a generous helping of solitude. This is what impressed frontier woodsmen and naturalists about the West, and we can enjoy it yet today in certain areas that we have protected from overuse and civilization. As with symphony orchestras and art museums, not everyone wants wilderness (fortunately, considering the small supply), but the opportunity to enjoy it must always be there. Shouldn't we see to it that our children, who will live in a still more crowded and "used-up" world, have at least a little of the same opportunity? After all, we evolved from the wilderness ecosystem barely an instant ago in earth time, and we invite our own destruction by ignoring natural laws and being heavy-handed with nature.

Rather than emphasizing *use* of unadulterated natural areas, we might do better to think of the *enjoyment* they can provide. Quite possibly, most of the enjoyment derived from wilderness is obtained vicariously, by those of us who read and see pictures and movies of places we seldom or never visit. Our lives are enriched just by knowing the wilderness ecosystem is there.

The River of No Return is an outstanding national resource; thus it must not be managed primarily for local outfitters, for forest rangers, or for wilderness advocates or any special group, not even just for the present generations of Americans. People all across our nation have a stake in this fabled waterway, and hopefully they will help to resolve its fate.

Saving the River of No Return seems to be an almost impossible dream. But America was founded on impossible dreams, and what quality we do enjoy in modern life has been made "possible" by hard-working idealists pursuing such "lost causes." Moreover, if our conservation ethic is not affirmed on the Salmon, one more battle for man's environment is lost. If we lose many more such battles, our species may earn for itself the epitaph, "Gone, forever, down the River of No Return." ■



Salmon River below Horse Creek

Laura Beall Woods

GUNNAR A. PETERSON

Magnificent trees towering 160 feet and more skyward, lush undergrowth that seemed never to have felt the step of man, a remnant of the primeval forest that once covered northern North America.

This and more is what met the eyes of Jeffrey R. Short, Jr., Chicago business executive and conservationist, when he first visited Laura Beall Woods along the Wabash River in southern Illinois more than a dozen years ago.

On the day he first saw the wonderful forest, Mr. Short began work to preserve it for the people of Illinois, and over the years he was joined in the effort by many other conservationists, scientists, and nature enthusiasts. For them it was a dream come true in 1965 when the state of Illinois acquired the forest as a nature preserve by exercising its right of eminent domain—a right more often used in behalf of highways than state parks.

At many times, over the years, it looked as if the dream never could come true. The odds against saving the forest were very high. What brought about eventual success could be described as a model of leadership by interested citizens, acting through community organization to bring about cooperation by local, state, and federal governments for a common and important goal.

Never in question, however, was the value of the 625-acre tract that Mr. Short had "discovered." The land had been in the possession of one family for 80 years and had been largely left alone.

"It was immediately evident that this was an extraordinary stand of virgin timber that had been largely untouched," said Mr. Short, who since 1963 had been chairman of the Open Lands Project. Although particularly directed toward preservaton of open space for recreation and conservation in the Chicago metropolitan area, the Open Lands Project's concern for the entire state of Illinois gave it strong interest in Beall Woods.

Colleagues of Mr. Short on the Open Lands Project Board and members of the Nature Conservancy visited the site and expressed their enthusiasm.

Dr. Charles E. Olmsted, chairman of the University of Chicago's Department of Botany, told of visiting the woods. "It gives a sensation that can't be described," he said. "If you've never been in a forest like this, you have no idea of what you experience, standing in it."

Dr. William J. Beecher, Director of the Chicago Academy of Sciences, also a member of the Board, said the woods reminded him of the tropical rain forest in the Solomon Islands. "I had never seen anything like it in eastern North America," said Dr. Beecher. "I was familiar with remnants of the eastern hardwoods, even the best of them in the Great Smokies, but I had never seen trees this large. I kept saying, 'This looks like a shellbark hickory but it's too large,' or, 'These look like burr oak acorns, but they are so large they look different.'

"All at once I knew that in the past I had been dealing with second- or third-growth forests and that I had never seen the real thing before. Somehow this magic forest had escaped the ax; this is the way it was from the Atlantic Ocean to the Illinois prairies thousands of years before European man arrived.

"There is good evidence that a forest of this type has existed continuously, though not necessarily in this location, for 70 million years. During the 'cretaceous' period it ranged continuously from Southeast Asia across Bering Strait to southeast United States."

Experts like Dr. Alton Lindsey, a plant ecologist from Purdue University, visited the tract, which is about 6 miles southwest of the southern Illinois town of Mount Carmel. They agreed that Beall Woods was the finest stand of virgin timber remaining in the Midwest and that it should be preserved for scientific study if for no other reason.

The National Park Service has designated Beall Woods a registered natural history landmark, and, in approving the designation, Secretary of the Interior Stewart L. Udall called it "the largest and oldest remaining hardwood forest primeval in the midwestern United States."

Following is the formal description of the woods which is included in its federal registration as "The Forest of the Wabash, Illinois":

"The Forest of the Wabash, also known as Beall Woods, appears to be the finest remaining example in the Wabash section of the oak-hickory forest. Until 1962, it had remained in the ownership of the Beall family for over 80 years. A few trees were removed about 20 years ago but in minor numbers and with little effect upon the forest.

"The tract is in essentially untouched natural condition. Presence of huge old trees with undisturbed understory, sapling and seedling strata of the same species as the canopy indicates climax status. Preclimax and postclimax conditions which normally occur on varied terrain such as this are represented also.

"The forest lies along the Wabash River. River bottomland and upland forest communities are represented. The upland is true oak-hickory climax with white oak probably dominant but with several other hickories and other oaks abundant. Tulip tree is dominant in several locations. Sugar maple, American elm and black cherry are common. Many of these trees measure over three feet in diameter at breast height.

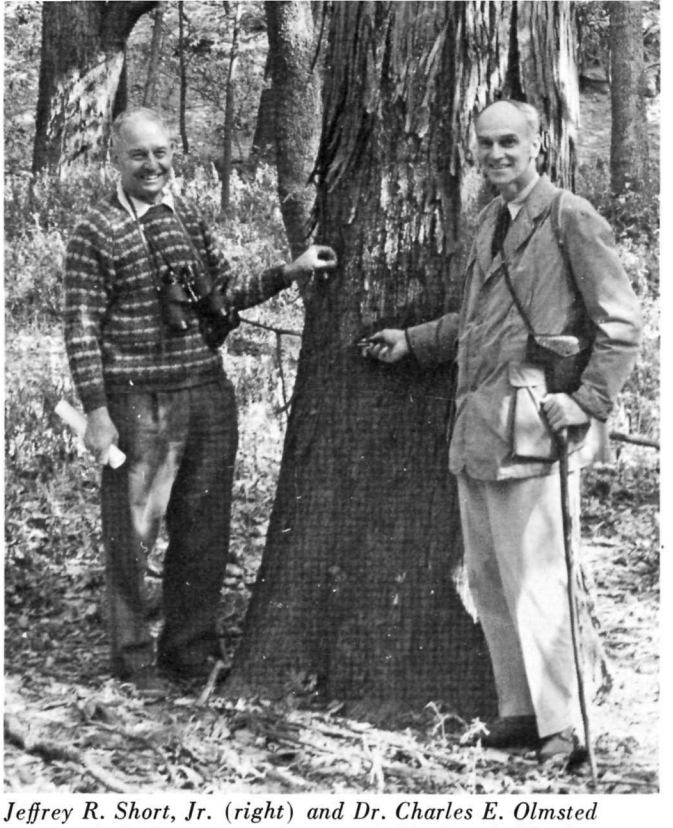
"The lowland, or floodplain, sections contain mainly sycamore, silver maple, cottonwoods, willows and oaks. Many are of great size. One giant sycamore measures nearly four feet in diameter at breast height.

"Small streams which arise within the forest flow evenly with clear water. During floods the contrast of these streams with the heavily silted, overbank conditions of streams which flow through nearby denuded areas is striking."

Jeffrey Short has counted 49 different species of trees in the woods and noted that trees that grow well in the north and those known to flourish in the south, including wild pecans, intermingle because of the climate in the lower Wabash valley. Since then state foresters have identified another 11 species. Dr. Lindsey's published paper stresses the significance of the intermingling of the northern and southern trees.

During the 1950's Mr. Short attempted to contact Miss Laura Beall, owner of the woods, about preserving it; but she would neither answer letters nor meet with him. After her death in 1962 the property was sold at auction because she had no will, and the new owners let contracts for the cutting of white oak trees for use in the manufacture of whisky barrels in Liverpool, England.

Gunnar A. Peterson is director of the Open Lands Project, organized in 1963 to promote the saving of space for the parks and recreation while vacant land still remained in the Chicago metropolitan area.



Jeffrey R. Short, Jr. (right) and Dr. Charles E. Olmsted measured the base circumference of this fine shellbark hickory as 11 feet.

With time running out on the forest, Mr. Short and the late Roy Dee, then mayor of Mount Carmel, went to Illinois Governor Otto Kerner with a plea to save the trees. Kerner listened. The state began condemnation proceedings after the Illinois Department of Conservation reported that the tract was unique and should be saved.

Mr. Short and many of the other experts who had come to know and love the woods over the years went to Mount Carmel to testify in a trial that resulted in the state's winning the right to acquire the land under its right of eminent domain.

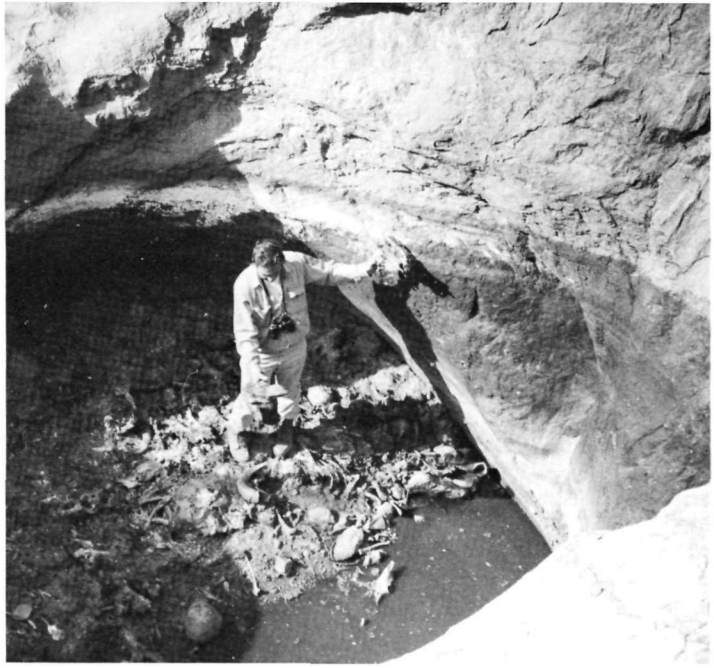
At a later trial, a jury set $287,500 as the price to be paid by the state, and acquisition was completed in September 1965. The federal government has provided a grant of half of the purchase price, or $143,750, from the Land and Water Conservation Fund to assist with purchase of the property.

The Illinois State Department of Conservation now has developed plans for the forest. About 235 acres of virgin timberland lie within the overall property of 625 acres, and planning is directed toward keeping the forest in natural condition with trails established for nature study and quiet recreation. Facilities for administration and visitor-use are restricted to adjoining parkland formerly in cultivation. The virgin timberland area has been designated as a nature preserve under provision of the Illinois Nature Preserve Act of 1963.

For his efforts in behalf of Beall Woods, Jeffrey Short was honored as Forest Conservationist of the Year for 1965 by the Illinois Federation of Sportsmens Clubs and also received a national award from the Nature Conservancy. ■

A Remodeled Deathtrap

Mary Bowen



The normal water level of this natural cistern is readily apparent. As the water level goes down during long dry spells, the waterhole becomes an increasingly dangerous trap. California Department of Fish and Game biologist Richard Weaver stands at the bottom of the 10-foot deep hole.

The escape ramp that will end forever the threat of animal drownings here. Scrambling up the ramp is Richard Weaver. Other California Department of Fish and Game personnel are, from left to right, Jerry Mensch, John Colby, and James Maddox.

A WATERHOLE in the remote Chocolate Mountains of southeastern California will trap no more bighorn sheep. The waterhole was a naturally formed cistern in a rock formation that would fill with water during desert cloudbursts. When the water level dropped, however, bighorn sheep that attempted to drink would fall in and be unable to get out.

California Department of Fish and Game biologist Richard Weaver, in charge of the wildlife team that discovered the waterhole, sought the assistance of U.S. Bureau of Land Management personnel who administer the area. Together they planned to provide an escape ramp from the waterhole. A Bureau of Land Management work crew set out on foot for the remote area. A helicopter was required to bring in rock-drilling and blasting equipment. The men went to work along one of the sheer walls of the deep hole, chiseling and dynamiting until a safe access ramp had been completed to the bottom of the former deathtrap.

The remains of the drowned sheep were collected from the bottom of the natural cistern. Evidence indicated that at least 34 desert bighorns had died there in recent years.

Weaver and the other investigators, Richard Colby, Jerry Mensch, and Fred Worthley, began work in the summer of 1968 to investigate the status of bighorn sheep in California and to formulate management recommendations.

Bighorn sheep once roamed extensively in California. The encroachments of civilization, however, have eliminated them in all but the most rugged and remote areas of the southern part of the state. Present conservation practice includes efforts to safeguard the sheeps' water supplies and to provide water sources when necessary. Alteration of this one waterhole will end forever the needless deaths of these scarce wild sheep in its trap. ■

news & commentary

MOVING INTO THE ENVIRONMENTAL DECADE

In December nine congressmen called a major news conference to propose naming the 1970's the "Environmental Decade." The bi-partisan group consisted of Representatives John Dingell and Guy Vander Jagt of Michigan, Gilbert Gude of Maryland, Floyd Hicks of Washington, Paul McCloskey, Jr., and John Moss of California, Henry Reuss of Wisconsin, John Saylor of Pennsylvania, and Jim Wright of Texas.

The group called for all Americans to make "a New Year's resolution for the decade: 'I pledge that I shall work to overcome all that degrades our earth, our skies, our water, and the living things therein, so that at the end of the Environmental Decade of the 1970's we may see our environment immeasurably better than at the beginning.' "

At the same time the nine said they would work on "a broad series of fronts" in Congress. These include water scarcity and the pollution by heat and filth of what we have; heedless draining of wetlands; air pollution, especially by the internal combustion engine; noise pollution; soil erosion by poor farming practices or by the bulldozer in suburban development; pollution of soil, air, and water by chemicals, particularly pesticides and herbicides; accumulation of solid wastes and litter, substances that in many cases should be re-used; destruction by overcutting and poor forestry of our national forests and other woodlands; the push toward extinction of so many species of wild animals; depletion of mineral resources; erosion of that most fragile and invaluable of resources, wilderness and natural beauty; and the cause of it all, exploding population.

The group said it depends on youth as the great hope for the decade. Young people, the group said, "understandably outraged by the cynicism and materialism of their older generation," should substitute constructive impulse toward the environment for destructive negativism.

Though the government must "reorder its structure for an all-out fight" during the decade, the lawmakers said, "citizen activity must lead the fight. . . . We turn to the people not just of the United States but of the world. Pollution of the environment threatens to engulf . . . all the land and sea and air.

"Let the 1970's, then, be preoccupied with life and the quality of life. Before we starve, or choke on polluted air, or poison ourselves with our ruined waters, let us fight all who get in the way of a decent environment."

N.Y. CONSERVATION BILL OF RIGHTS VOTED

New York State voters have voted into effect an amendment to the state constitution that justifiably has been called the conservation bill of rights and one of the nation's greatest conservation victories. The amendment is to Article XIV, "Conservation," and reads thus:

"The policy of the state shall be to conserve and protect its natural resources and scenic beauty and encourage the development and improvement of its agricultural lands for the production of food and other agricultural products. The legislature, in implementing this policy, shall include adequate provision for the abatement of air and water pollution and of excessive and unnecessary noise, the protection of agricultural lands, wetlands and shorelines, and the development and regulation of water resources. The legislature shall further provide for the acquisition of lands and waters, including improvements thereon and any interest therein, outside the forest preserve counties, and the dedication of properties so acquired or now owned, which because of their natural beauty, wilderness character, or geological, ecological, or historical significance, shall be preserved and administered for the use and enjoyment of the people. Properties so dedicated shall constitute the state nature and historical preserve and they shall not be taken or otherwise disposed of except by law enacted by two successive regular sessions of the legislature."

Prior to the amendment the article in question provided well for forest preserves and wildlife conservation, but it went no further. The new language provides a good legal basis for protection of farmlands, wetlands, and shorelines; reduction of air, and water, and noise pollution; and preservation of lands and waters for their beauty, wilderness character, scientific value, or historical significance. In the absence of such legal basis units of the state government and the courts of New York have tended to favor development and economic interests over the values covered by the amendment. They simply have had no mandate to which they could point, even if they wished to do so, that required them to act otherwise.

There seemed to be little political difficulty in getting the amendment passed. The required votes of approval by two successive legislatures were almost unanimous, and the voters approved the measure by a comfortable margin. This might have been expected due to the superb intrinsic tactics of the constitutional amendment approach. Not only does such an amendment affect the most basic and therefore pervasive level of law; but as it does not deal with a specific confrontation between development and conservation there can be no specific economic or special-interest argument against it. Opposing the type of general language in the conservation bill of rights would be somewhat like opposing America the Beautiful, yet the language has meaning and it has teeth. Conservationists in other states are considering similar amendments.

DDT PHASEOUT PROPOSED BY HEW SECRETARY FINCH

Dichlorodiphenyltrichloroethane took its well-deserved licks as 1969 drew to a close. First, Secretary of Health, Education, and Welfare Robert H. Finch said he would move to restrict the domestic use of DDT to applications *"essential"* to the preservation of human health or welfare. Mr. Finch said he would meet with Secretary of Agriculture Clifford Hardin and Secretary of the Interior Walter Hickel to plan the phaseout, which would take two years. The three secretaries would determine essential uses unanimously. Mr. Finch implied that other persistent pesticides would be considered for possible restriction, particularly dieldrin, aldrin, endrin, lindane, chlordane, and heptachlor.

Hardly was Mr. Finch's statement of intent published than Secretary Hardin, whose Department is the prime regulator of the use of pesticides, announced immediate notice of cancellation of licensing for the use of DDT against shade tree pests, pests in aquatic areas, house and garden pests, and tobacco pests. These uses account for 14 million pounds of DDT a year, or about 35 percent of the total domestic use. Furthermore, Mr. Hardin said, the Department intends to cancel all other DDT use licenses, with action to be completed by the end of 1970 and with "essential" uses again excepted. Finally, beginning in March, action will begin against other persistent pesticides, using the same criteria and procedures.

It is a relief to see the government at last taking action it must take in order to protect the people. Holding back one's happiness is the failure to take

any action to halt the export of DDT. At the moment twice as much of the poison is exported as is used at home. It all ends up in the same spaceship Earth. By forbidding domestic use but allowing export, we are simply pushing the problem "out of sight, out of mind" for a short while. This is futile and dangerous.

REEF DEAD AHEAD!

Signs indicate (see above) that public opinion may at long last be responding to the weight of evidence compiled by biologists against DDT and its six chlorinated hydrocarbon pesticide relatives. That tide of opinion, however, recently may have caught the Department of Agriculture sailing in the wrong direction and in imminent danger of hitting a reef at Mason Neck, some miles below the nation's capital on the Virginia shore of the Potomac River.

Over a number of years conservationists and other interested persons in the northern Virginia counties have given generously of time and money to establish Mason Neck as a protected area in which a wealth of animals and plants could flourish under relatively natural conditions and in a highly scenic setting. In particular, many people were interested in keeping developers' bulldozers, sewage treatment plants, and an assortment of other proposed disabilities out of one of the few active bald eagle nesting sites of the mid-Atlantic coast.

But even as governmental commissions discuss the desirability of phasing out of general use DDT and its deadly relatives, the Department of Agriculture reportedly has requested landowners in the vicinity of Mason Neck to spray their holdings with dieldrin against the Japanese white fringed beetle, which is said to have turned up there. Conservationists could foresee the normal ecology of the Neck knocked into a cocked hat, along with the eagles and years of protective efforts. NPA President Smith has written Dr. Lee A. DuBridge, Science Advisor to President Nixon; HEW Secretary Finch; Agriculture Secretary Hardin; and Interior Secretary Hickel to protest this dangerous practice. After an unpromising preliminary encounter with Agriculture, other conservationists have taken the matter to the office of Senator William B. Spong of Virginia, who has commenced an investigation that should, in our opinion, quickly halt the dieldrin operation and develop alternatives.

QUINAULT INDIAN BEACH CLOSED TO WHITES

The Quinault Indian Reservation lies along the Washington coast cheek by jowl with the wilderness beach section of Olympic National Park, and like the park it boasts some of the most beautiful seacoasts in the United States. The Indians have always lived there by the Pacific; their culture grew out of the damp woods, the rock-rimmed beach, and the sea. They love their land the way it is, and for all intents and purposes it might have been part of the park.

But now white-eyes are barred. The Indians have kicked the weekend tourists and picnickers off their 25 miles of beach, and for excellent reasons. Thieves, say the Indians, stole fishnets drying on the beach; litter was tossed everywhere; driftwood valuable to the Indians was carted off wholesale; Indian clam beds were destroyed; and cliff rocks were defaced.

"We've got legends about some of them (the rocks) that go way back," Quinault Chief Jackson said. "When you see some idiot up there with a spray can painting 'Kent High School' or something like that, it kinda ticks you off!"

The Indians are being more reasonable than could justifiably be expected, however. The tribe's business manager, Joe Delacruz, says the beach may be reopened if tighter security can be arranged and if the tribe can get pledges of cooperation from campers, visitors, and land developers. Whether the white man's pledges are worth anything is for the Indian to decide.

Washington Governor Daniel J. Evans, with a flourish of incredible insensitivity, said that the *real* issue is whether the shore is owned by the state or the tribe. It is true that the legality of the closure of the beach is open to question, and no doubt by this time the forces of human vandalism will have triumphed again. Let us hope not. The Indians' kind of feelings and the beauty they wish to preserve are as rare as clean air in this country and should not be trampled on. That is the real issue.

RE-USING WASTES TO LOOP THE SYSTEM

Wastes are in the mind of the beholder. Garbage cans barely approachable by humans are the end of the rainbow to legions of cats. Yet the same cats will fastidiously refuse so delectable a morsel as a piece of hot pastrami sandwich. There are no absolutes in garbage.

This philosophy is recognized by a growing trend in waste management. The idea has been called "looping the system" by Aaron J. Teller, dean of engineering and science at Cooper Union. It depends on the fact that all we really need in constantly new supply is energy from the sun. All the material of our lives stays on the planet. Until now we have tended to use this material only once before returning it, usually as a pollutant, to the environment. Presently, however, we are caught in a squeeze between two crises—pollution and depletion of nonrenewable natural resources (coal, oil, gas, metal ores, minerals, and so on). Looping the system is the answer: wastes should be regarded as raw material for a new cycle of processing, so that valuable substances are constantly reused.

Consider the problem of air pollution by sulphur dioxide. At worst this gas is emitted by oil and coal-burning power plants and other industries as a noxious pollutant; at best it is converted to solid waste by pollution abatement systems on the smokestacks. Yet there is a severe shortage of sulphur at the moment. While a typical power plant may pile up nearly 40,000 tons of sulphur in solid wastes per year, industrial consumers are paying about $40 a ton for this vital chemical.

In a laissez faire economy where the environment is a free dump that an industry must use because its competitors do, reprocessing wastes indeed may not be profitable as is usually claimed. Often for "unprofitable" one can read "We have neither time, money, nor inclination to research ways to make recovery of this relatively insignificant product profitable." But society is rapidly demanding that the environment not be a free dump. At the same time, industrial leaders with any foresight are recognizing that what may be insignificant today will be the treasure of tomorrow when the mines run out. And as pollution abatement costs rise along with the value of the pollutants, it is being discovered that there is plenty of reprocessing technology at hand.

An excellent example crops up in the efforts of Dr. Chung-ming Wong to sell desalination equipment outside the fresh-water-from-sea-water field. Dr. Wong is director of the Interior Department's Office of Saline Water. He says that desalination equipment could be helpful in numerous pollution abatement processes. The dairy industry, for instance, discharges 10 million tons of whey a year as the waste from cheese making. The phosphate load alone of this effluent is equivalent to that of the sewage of 13½ million people. And the fluid contains 500,000 tons of nutritious milk solids sorely needed by hungry humanity. Desalination could extract the valuables and at the same time produce a clean-water effluent. Dr. Wong says there are applications for desalination in industries from steel to paper.

It would seem to behoove industrial

polluters to take a calm look into the future both of the environment and the economy, then to see what technology has to offer today, before becoming intransigent on the stand that pollution is inevitable. That is an old-fashioned idea, born of tunnel vision restricted to one plant and one product. In this day of great conglomerates it would seem feasible for a few power company executives to learn to sell sulphur.

PROFITS BEFORE POLLUTION ABATEMENT

"The central question is not whether we should have cleaner water, but how clean, at what cost, and how long to take to do the job. Public enthusiasm for pollution control is matched by reluctance to pay even a modest share of the cost. This attitude will have to change."

The speaker was John E. Swearingen, chairman of the board of Standard Oil Co. (Indiana), addressing the Interior Department's recent National Executives' Conference on Water Pollution Abatement. NPA's conservation consultant, Dr. Walter Boardman, attended the meeting and reports that Interior Secretary Walter Hickel in an excellent statement took the position that people want pollution reduced and that all segments of society must stop polluting the environment. Dr. Lee A. DuBridge, fatalistically noting that the good old days are past, said that personally he likes his car, air conditioning, and other modern conveniences. But we have bought these things at a price, he said, "the price of reduced living space and a deteriorating environment." He made the same point as did Mr. Swearingen, that the cost of waste disposal should be borne by those who demand the products manufactured.

Generally, Dr. Boardman reports, the assembled high executives took the position that although they have long worried about pollution, even going so far as to spend some money on research and abatement hardware, they also worry about profits and stockholders' reactions. Pollution, they said, is not as bad as the press and fanatics have made it out to be, and maybe we can get used to it.

Maybe we cannot. Mr. Hickel assessed the mood of the people precisely—they are sick of filth. They are not prepared to compromise very much either. They want their heritage of healthy surroundings returned to them, as it was originally, not half rotten or a third rotten. But Mr. Swearingen was right in his second point. People somehow want industry to pay the cleanup costs out of thin air, as a sort of penance. Yet we fully expect the cost of such things as power to be passed on in the cost of the product. The same should apply to other valid operating costs such as pollution abatement. Then we would have some competitive force for efficiency in abatement as there is a force for efficiency on the production line.

Unfortunately, behind the calls of some executives for spreading the cost is the expectation that this involves tax dollars. That is as out of line as requiring industry to pay out of thin air. There would be left no incentive to minimize pollutant-producing practices or to do anything else to make the job easier—the buck would just be passed to the government.

AMCHITKA NUCLEAR TEST GOES WITHOUT INCIDENT

The macabre humor of the New York *Times* headline was not missed by the editorial writers: "Aleutian H-Bomb Is Fired Without Setting Off Quake." Perhaps the Atomic Energy Commission will have the same happy news for us after later, larger tests in the series. Perhaps it will be proud of its batting average if it ends up with only one serious quake and tsunami in the whole series planned.

As pointed out in these pages in October, the "test" shot proves nothing with regard to quake safety, however much geological data it may provide on the island's rock structure. Our knowledge of what causes earthquakes is almost nonexistent. Milrow, the "test" shot, at 1.2 megatons may have been a kiloton too small to knock the Aleutian fault loose. The next shot, much larger, may be big enough. Furthermore a significant number of seismologists believe that large earthquakes may be triggered by a succession of small quakes. It is known that the great Alaskan quake of 1964 was presaged by a number of small shocks. Perhaps a series of bombs can have the same violent ending as a series of small natural shocks.

The concern is not that anyone thinks there is a large probability of a quake; it is that nobody knows enough to predict the outcome. The defenders of the AEC can talk all they like about how many experts the AEC employs, but our lack of knowledge is a fact. The agency could hire every expert on the planet and still be no better informed. One does not go out for target practice and use a patch of woods as the backdrop for the targets. It is highly unlikely that any bullets will pass through the woods without hitting a tree; but it has happened, and there are people dead to prove it.

AEC LEADERS LEAN ON "ECOLOGYOMANIA"

Conservationists for years have been trying both to learn and to pass on to others the lesson of the emergent science of

ecology, which teaches us simply that life is a community; that if we wish our community to be a rewarding or even possible place to live, we must treat it according to the same rules of society observed by our community within a community, human culture. Believing as we are supposed to in the civilizing precepts that hold our human culture together, it is surprising that this simple lesson of ecology has been so hard to get across. True, civilization is a veneer, and we were barbarians not so long ago. But even the most barbaric barbarian could see the sense in not burning down his own house while he was yet in it.

In recent years—almost, it might be said, in recent months—it seems that at last the message is getting through. Perhaps alarmed by a smell of smoke from their environment, people—the Silent Americans of Mr. Nixon—have had the temerity actually to demand an end to wantonness in the treatment of their good Earth. The threat to the survival of life on the planet has managed to take a place among the other important issues of the day.

Among organizations whose treatment of ecosystems has been at least questionable must certainly be listed the Atomic Energy Commission. The AEC's handling of nuclear testing in the Aleutians and nuclear power development elsewhere leaves a lot to be desired. Nobel laureate Dr. Glenn T. Seaborg, chairman of the AEC, has unburdened himself of the view that "Today's pollution problems have caused many people to become what may be characterized as 'environmentally uptight.' " Representative Craig Hosmer of California, a prominent member of the Joint Committee on Atomic Energy, called it an "ecological syndrome" or "ecologyomania." "Syndrome" is a medical term meaning a group of signs or symptoms that occur together and characterize a particular abnormality. "Mania" is either a form of psychosis or "excessive or unreasonable enthusiasm."

In a recent Gallup poll conducted for the National Wildlife Federation, 86 percent of the respondents said they were concerned about such things as air and water pollution, soil erosion, destruction of wildlife, and the degradation of our natural surroundings; 51 percent said they were *deeply* concerned. It does not appear seemly for highly placed members of the government to characterize the feeling of over half the people (assuming the poll is representative) as "uptight," abnormal, excessive, or unreasonable. In view of the tremendous destruction of the foundation of life, the feeling of the people is justified and their chosen leaders ought to heed it.

SYMPOSIUM ON SAVING THE AMERICAN CHESTNUT

Around the turn of the century a fungus called *Endothia parasitica* emigrated to the United States from its native Asia. It proved to be a destructive addition to our flora. By 1970 it had rendered the once-ubiquitous American chestnut almost extinct.

In November, at a symposium at Sugarloaf Mountain in Maryland sponsored by NPA, Stronghold, Inc., the Frederick Forest District Conservancy Board, and the Accokeek Foundation, leaders in the field gathered to compare notes and progress along several lines of investigation.

Much of the work devoted to saving the chestnut has been aimed at producing a hybrid between the American tree, *Castanea dentata*, and Asian members of the same genus that are blight-resistant, a hybrid that can assume the American chestnut's ecological role. One major drawback to this approach is that the Asian trees are orchard-type trees that produce good nuts but may be too small to produce a hybrid with the valuable timber that was the other important product of the native tree. Moreover the hybridization idea gives up on saving the native species.

The best hope for getting a resistant tree with other characteristics as close as possible to our almost vanished forest resident seems to be to develop a mutation in *C. dentata* with resistance to the blight as well as desirable nut-producing and timber characteristics.

This symposium is a step toward information exchange among researchers that we hope will result eventually in reestablishing this valuable tree in our eastern hardwood forests.

NPA TESTIFIES AT WATER COMMISSION HEARINGS

National Parks Association President Anthony Wayne Smith has called for "a complete revision of basic assumptions" in water resources management in testimony requested by the National Water Commission.

Among the recommendations in Mr. Smith's statement were calls for recycling waste water to avoid pollution and to reduce the need for large storage reservoirs; for replacing the reservoir and dam approach to flood prevention, where possible, with watershed management, flood-plain protection, and control of the uses to which flood plains are put; and for the management of streams and lakes so as to yield ecological, social, and esthetic, as well as economic benefits.

LAND LAW REVIEW STUDY REPORTS AVAILABLE, SCARCE

Conservationists should be preparing for the report to Congress of the Public Land Law Review Commission, due by June 30. The betting is that the report will be something of a shock. The Commission is chaired by Representative Wayne N. Aspinall of Colorado, who is far from being the conservationists' hero. We will attempt to keep readers posted on the Commission's doings in these pages until the report comes out.

Commission Director Milton A. Pearl announced recently that contractor study reports on public land use and occupancy, and on outdoor recreation on public lands, are available for public inspection at the Commission office, 1730 K Street NW, Washington, D.C.; at designated National Archives Records Centers; and at the Conservation Library in Denver, Colorado. It is unfortunate that there is not wider distribution.

STEELWORKERS JOIN EVERGLADES COALITION

The United Steelworkers of America have joined the coalition of organizations fighting to save the Everglades from the air age. In a letter to NPA President Anthony Wayne Smith, International Secretary-Treasurer Walter J. Burke said he "wholeheartedly agrees" with the coalition program and that he and International President I. W. Abel are "most pleased" to add the Steelworkers to the coalition. The Everglades Coalition now includes:

AMERICAN FISHERIES SOCIETY
AMERICAN FOREST INSTITUTE
AMERICAN FORESTRY ASSOCIATION
ANTI-POLLUTION LEAGUE
AUDUBON NATURALIST SOCIETY
CITIZENS COMMITTEE ON NATURAL RESOURCES
DEFENDERS OF WILDLIFE
FLORIDA AUDUBON SOCIETY
FRIENDS OF THE EARTH
GARDEN CLUBS OF AMERICA
NATIONAL AUDUBON SOCIETY
NATIONAL PARKS ASSOCIATION
NATIONAL RECREATION AND PARK ASSOCIATION
NATIONAL WILDLIFE FEDERATION
NATURAL AREA COUNCIL
NATURE CONSERVANCY
SIERRA CLUB
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IOWA WALNUT LAND for sale. Eight 10-acre plots of Iowa land, each with 10,000 black walnut trees planted, plus valuable other timber, for sale at $3,100.00 each 10 acres total price. R. W. Daubendiek, 504 Center Avenue, Decorah, Iowa 52101.

KODACHROME SLIDES from prints, artwork, and Polaroids. Dark slides lightened. 3 for $2. Box 42082, Los Angeles, Calif. 90042.

Authentic AMERICAN INDIAN MUSIC and chants on high-fidelity phonograph records. Free catalog: Mail Order Dept. Canyon Records, 6050 N. 3rd Street, Phoenix, Arizona 85012.

CAMP DENALI, McKINLEY PARK, ALASKA—A wilderness retreat in the alpine subarctic, featuring hiking, photography, birding, fishing, nature lore. Special group programs, and all expense vacations. For brochure write: Box D, College, Alaska 99701.

LIGHTWEIGHT EQUIPMENT: Cross country skiing; Snowshoeing; Backpacking; Canoes and Kayaks—all types; Mountaineering gear and clothing. Free Catalog. MOOR & MOUNTAIN, Dept. 40, Main St., Concord, Mass. 01742.

GRAND TETON COUNTRY—A quiet spot along the Gros Ventre River. Dude Ranch. Riding, fishing, hiking—birds, beaver, wild flowers. FLYING V RANCH, Box 72, Kelly, Jackson Hole, Wyoming 83011.

When did you last see a field full of butterflies? As an author indicates in an article beginning on page 4 in this issue, butterflies were abundant before World War II but were unintentional victims of pesticides. The consequences of pesticides are even more far reaching, as revealed in our November 1969 issue. Moreover, although DDT soon may be banned with a few exceptions (page 27), its relatives—dieldrin, aldrin, heptachlor, lindane, chlordane, and endrin—are even more deadly and should be banned also.

You can help your Association in its studies of vital environmental issues in several ways: by helping secure new members, by contributing to the Association over and above regular dues, or by remembering the Association in your will. Such contributions and bequests are deductible for federal tax purposes.

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PHOTOGRAPH BY P. M. TILDEN