

## BEYOND RECREATIONAL VALUE: THE GREATER OUTDOORS PRESERVATION-RELATED AND ENVIRONMENTAL BENEFITS

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### INTRODUCTION

The word recreation contains the word creation. On first analysis, recreation typically benefits Americans because it re-creates, rejuvenates them when they are worn from work. At deeper analysis, when such recreation takes place in the natural environment, the creation is the content of human re-creation. Preserved by humans, perhaps as a park, a wilderness, a wildlife refuge, the natural world preserves human life—by re-creating it. Persons go outdoors for the repair of what happens indoors. They leave the built, cultured environment to seek the natural environment. At times this may be just recreation, quite beneficial and hardly different from indoor recreation. But often there is more, and this "more" needs to be explored. In the outdoors, one "touches base" with something greater than can be found indoors. Encounter with creation re-creates. Such benefits are philosophical and intangible, but real and deeply felt. Can they be made explicit?

### SUMMARY OF FINDINGS

#### Life Support Benefits

Americans outdoors recontact the natural certainties. Forests and soil, sunshine and rain, rivers and sky, the everlasting hills, the rolling prairies, the cycling seasons—these are superficially just pleasant scenes in which to recreate. At depth they are the surrounding creation that supports life. If one insists on the word, they are resources but now it seems inadequate to call them recreational resources. They are the sources that define life. They are the life-support system, the ecosystems that humans inhabit. The central "goods" of the biosphere—hydrologic cycles, photosynthesis, soil fertility, food chains, genetic codes, speciation and reproduction, life and death and life renewed—were in place before humans arrived, though they have lately become human economic resources and even more lately increasingly serve as recreational resources. They are the timeless natural givens that support every thing else. (Rolston, 1983, 1986a, 1986b; Barbour, 1980)

Beyond the recreational value of catching trout, shooting ducks, or drinking a cup of water at a trailside spring, there is also and more subtly re-creation. Outdoors, Americans participate more intimately in their ecology. Perhaps the ritual is largely symbolic; a camper's groceries still come largely from the supermarket. But for precisely that reason many need at least the symbolism of the hunt, the fishfry, the drink of water from the unpolluted stream, outdoor survival skills, all of which immerse persons in the natural order. Life support by the greater outdoors is not symbolism at all, but literal and real.

If the outdoorsman is ecologically educated, these benefits will be more advanced. He or she will appreciate nitrogen-fixation, heterotrophs and autotrophs, nutrient recycling, water runoff regulated by forest cover, an unmo-  
lested environment as a baseline for ecosystem studies. (Ehrenfeld, 1976) It is no accident that the well-educated are present beyond their populational averages in the outdoor scene. (Kellert, 1979) Where the outdoorsman is less sophisticated these benefits are present more intuitively in the gutsy feeling that comes with returning to the primeval order. It is therefore no accident that fishing and hunting have immense popularity—at depth for reasons that participants often poorly verbalize. (Kellert, 1979; Kellert and Berry, 1980) It is likewise no accident that Boy Scouting returns again and again to the outing in scouting to educate the boy into the man. For similar reasons, a president's commission on outdoor recreation ought deliberately to supply environmental education with recreation. At whatever level of sophistication this may be apprehended, there is a sense of return to basic, foundational ground outdoors. In this sense, one may first seek field and stream to "get away from it all," frustrated with office or factory. But one later discovers that he is getting back to it all. Humans undergo psychological experiences, explicitly or tacitly, that recontact their ecological supports in their resident environment. Contact with creation re-creates. This is a preservation benefit in deed!

### Aesthetic Benefits

Sometimes people recreate in nature to show what they can do; they want game to shoot, a cliff sound enough for pitons, a snow-packed trail to ski. Sometimes they recreate to be let in on nature's show; they want to enjoy the aerial skills of the hummingbird at the bergamot, the scenic beauty of the Grand Tetons, to listen to wolves howl. The one activity uses nature as an outdoor gymnasium; the other activity—really more contemplation—uses nature as an outdoor theatre. Especially in the latter, a major component is aesthetic. Nature presents works of grace—an eagle soaring, a snake slithering, a coyote on the run, the fiddleheads of ferns, purple mountains' majesties, the roar of cataracts, expansive seascapes. Now it is not life's support in the landscape so much as it is beauty in life and landscape that re-creates Americans outdoors. (Rolston, 1981, 1986b)

Aesthetic experience indoors is the experience of art—a painting, a statue, a symphony, Chippendale furniture. One appreciates artistry. Art objects have their frames, their pedestals; symphonies and plays are on stage and fine furniture is placed with interior design. Outside, everything is different and the character of aesthetic experience is radically other. Experience is of spontaneous nature, wild and without artistic intent. Nothing is framed; nothing is on stage; nothing is designed. The participant is in the midst of it all, surrounded by plain or forest, or standing high on the edge of the canyon. Even when observing the mountain on the skyline, the scene runs right up to our feet. Persons are challenged to do their own framing, to select what dimension of the scene to admire, how to respond to organic forms or geomorphic processes, to wind and water, smell and sound. Americans outdoors are not an audience, not beholders of a programmed performance. They go outside to see what thrills, expected or unexpected, spontaneous nature can arouse. (Hepburn, 1968)

It is hard to get a sense of awe or of the sublime indoors. Goose pimples more frequently come outside. The sense of abyss overlooking a gorge is aesthetic, as is the eerie chill when, nearing a stormy summit, one's hair stands on end in the charged air. So also is the thought that in one pine cone lies a possible forest—all experiences unlikely to be had in the Metropolitan Museum. A climber admires the mist that floats about an alpine cliff, spitting out lacy snowflakes, tiny exquisite crystals, at the same time that the gathering storm is dangerous to him. Nothing like that happens sitting in a Chippendale chair. A birdwatcher spots a pair of whooping cranes on the edge of a flock of sandhills and never thereafter forgets the rare birds, a vanishing life form of beauty. In the months and years following, reading of an increase or decrease in their numbers, he hopes for their recovery and fears their extinction, hopes above all that humans will not cause their extinction, and an ingredient in this hope is the memory of how once he shared aesthetically a moment of wonder.

Popular landscapes are undemanding; the lazy eye is jerked into looking. Even the kids put on their shoes and get out of the car at Niagara. A high plain or an everglade is something else, where discrimination deepens with the ecology, geomorphology, evolutionary history, or with a subtle delight in emptiness, solemnity, serenity, detachment, elemental silence. One can get as much kick out of the flush of a grouse as from the roar of a cataract. Plain places (as may be judged swamps and flatlands) have a coherence and completeness of which plain men never dream. Here familiarity breeds no contempt. Enjoying the greater outdoors aesthetically is vastly more than soaking up scenery. One is not seeing art; but seeing becomes an art. The more you see, the more you can see.

Continuing the theme with which we began, recreation again reaches on to creativity. Outdoor recreation demands and evokes aesthetic responses in ways for which there are no substitutes indoors. What is preserved in a park, a wilderness, a wildlife refuge, a water gap, an offshore island, a mountain on the skyline is not merely the life supporting environment; we preserve the possibility of dynamic aesthetic responses to the wonderland Americans inhabit.

### Scientific Benefits

Natural science is conducted in the field and in the laboratory. Although much activity in recent science requires elaborate indoor instrumentation and analytical equipment (electron microscopes and ultracentrifuges), it should not be forgotten that the subject matter of all natural science lies first and fundamentally in the greater outdoors. Pure science can be a good thing only if nature is an absorbing object in itself, and applied science can be a good thing only if nature is a pliable, many-faceted utilitarian object. Some natural sciences (biochemistry, physics) can be brought indoors rather successfully; some cannot (ecology, geomorphology); still others only halfway so (plant and animal taxonomy). The laboratories of major sciences still lie outdoors. (AAAS, 1963; Butler and Roberts, 1986; Cutler, 1980; Ehrenfeld, 1976; Mack et al, 1983; Rolston 1985a; Turner and Gregg, 1983)

The answers to many great unanswered questions lie hidden in the spontaneous natural environment, and also there lie unknown many questions we have not yet learned how to ask. Despite ecology's promise in recent decades, it is still the most juvenile natural science. Scientists have little idea how evolution takes place at ecosystem levels. Successive levels of biochemical organization

have properties that cannot be predicted from simpler levels, and the least known level of biological organization is that of landscape ecology in regional systems. Biologists are divided over whether interspecific competition is a minimal or a major force in evolution, and sizeable preserves outdoors are the likeliest place to settle the debate. Indeed, Americans outdoors are not yet clear about what the natural successions were, or are, over a few hundred years in many of their own landscapes. (Schoener, 1982)

Scientists do not know why the balds in the Southern Appalachians are there. Foresters have cut down northwest forests to discover that, on some sites, the forests cannot be regenerated, because foresters did not understand what the regenerative processes were. Scientists debate whether and how insects regulate forest productivity, uncertain whether insects are detrimental to trees or have coevolved with them to the mutual benefit of both. Insect outbreaks may provide, in an analogous way, beneficial effects such as those of fire that we have only lately come to recognize. (Mattson and Addy, 1975; Owen and Wiegert, 1976) Americans can discover how to answer these questions only in their outdoors.

Such knowledge gained is, in a way, hardly an American benefit at all. Perhaps produced and enjoyed by Americans, the knowledge comes to belong more globally to the world culture, rather like educated persons universally profit from what Darwin discovered watching finches on the Galapagos or from what paleontologists have discovered from the fossils unearthed at Dinosaur National Monument. These benefits cannot be discovered by citizens visiting a wilderness or national park, since considerable scientific expertise is required. But after such discoveries are made, they trickle down to benefit all educated Americans (or their foreign guests), who appreciate landscapes more fully when they have been more fully described by science. No one sees the Grand Canyon aright unless helped by geologists. No one sees the Everglades without benefit of ecologists and botanists. Increasingly, Americans outdoors want to be naturalists as well as recreators. They are birdwatchers, mineralogists, fern enthusiasts, butterfly collectors; they want a scientific appreciation of what they see. (Kellert, 1979; Kellert and Berry, 1980)

At depth we may not wish to call such serious concerns recreational at all. Such naturalist pursuits are perhaps not for pay, but neither are they exactly play. They involve humans at work figuring out how the world works. They are a kind of recreation gone in pursuit of creation.

### Natural History Benefits

The great outdoors is a place of life support, an ecosystem presently to be appreciated aesthetically and scientifically. Beyond this, wildlands provide the profoundest historical museum of all, a relic of the way the world was in 99.99% of past time. Humans are relics of that world, and that world, as a tangible relic in our midst, contributes to our sense of duration, antiquity, and identity. An immense stream of life has flowed over this continent Americans so lately inhabit, flowed there before us and still flows (however disruptedly so) around us. The museums of America must be often indoors; sometimes even when outdoors they will be historical parks recalling culturally significant events—Appomattox and Minuteman Historical Parks. But Americans also need what we might call "genesis parks"—living museums of natural history, quite as much as they need museums of their cultural history. America

the nation state is but the tip of an iceberg; beneath the American society resident here lie the vast depths of the continental history. (Nash, 1983)

That natural tale, how things are, how they came to be, is a story worth telling, and the great outdoors is worth preserving as the textbook from which it can be deciphered and taught. Human roots lie in it and humans find the story a delightful intellectual pursuit. No less than the history remembered in red, white, or black American years on the continent, that history too has an epic quality—the eras of the dinosaurs, of the glaciers, of the inland seas, of the Appalachian miogeosyncline, of Lake Bonneville, of the Rocky Mountain orogeny, of bison ranging across the plains. When a tourist at Yellowstone learns that anaerobic bacteria still present in those steaming pools exist in an optimal thermal habitat that survives little changed from the time when life evolved in an oxygen-free atmosphere, and that further studies might furnish clues to the origins of life on Earth (Brock, 1967), his or her recreation has touched creation. Again, we reach a preservation benefit indeed!

Without an appreciation of this evolutionary past, Americans cannot understand who and where they are. The river of life is a billion years long and humans have traveled a million years on it, recording their presence for several thousand years. Americans (the white ones!) have been here for four centuries, more or less. If the river of life were proportioned to stretch around the globe, the human journey would be halfway across a county, and humans would have kept a journal for a few hundred feet. The American trip would be a half dozen steps. Whatever the American strengths in their "manifest destiny" in the "New World," the American sense of presence proportioned to the depths of past historical change has been weak. Lately, some have even bragged of living in the "now generation." Americans can cure such myopia in the greater outdoors, visited for a vision of more scope. One discovers sources past resources. On a clear day, you can see forever.

### Endangered Species Benefits

Americans see the fauna and flora outdoors, the wildlife that coexists with their culture. Citizens meet nonhuman neighbors and aliens in the land. Unfortunately, Americans no longer see 500 species and subspecies that have become extinct since 1600. (Opler, 1977) Unfortunately, they rarely see another 500 species that are (officially or unofficially) threatened and endangered.

National parks, wildlife refuges, forests, wildernesses—these are in one sense "national" property, federally administered, publicly owned. Why are they preserved? For whose benefit? Old answers, still good ones, are that they are conserved as work places or pleasuring grounds for the multiple uses of the American people. An answer from a different perspective has of late been added. They are preserved because—at least in representative areas—fauna and flora ought to be there for what they are in themselves. Two-thirds of Americans believe that grizzly bears and whooping cranes have something like a biotic right to exist. (Kellert, 1979, 1986; Keliert and Berry, 1980)

With this answer, the proprietary word "national," appropriate enough for the political process, seems philosophically inadequate. A wilderness, a wildlife refuge is not an American place at all, if by that we mean to Americanize it. What Americans wish to preserve there, as expressed by Congress in the Wilderness Act of 1964, are regions "where the earth and its community of life

are untrammelled by man, where man himself is a visitor who does not remain." (U. S. Congress, 1964) These are realms where Americans value freedom so highly that they give even the wilderness the freedom to run itself. Wilderness management is primarily of the Americans who visit there, so as to arrange for minimal interference and to compensate for interferences previously unmanaged. In these places, almost enclaves in our national state, we need another Emancipation Proclamation. Americans do not want to be imperialists who trammel the wilds. By act of Congress, they resolve to be only visitors.

Such concerns appear in the Endangered Species Act of 1973, where Congress has lamented the lack of "adequate concern (for) and conservation (of)" threatened and endangered species. (U. S. Congress, 1973) The Supreme Court said of this Act that the "language, history and structure ... indicate beyond doubt that Congress intended endangered species to be afforded the highest of priorities" (U. S. Supreme Court, 1978), and this seems to recognize some good or interest of these species, an intent to protect them from danger or threat, even if this also reflects and coincides with "esthetic, ecological, educational, historical, recreational, and scientific values to the Nation and its people." (U. S. Congress, 1973) Even this language of politics suggests something philosophical—that endangered species ought to have their place on the American continent, mixed with the values of the people.

The deeper good being preserved is life itself, indeed the highest of priorities. Extinction shuts down the generative processes. What Americans are doing, or allowing to happen through carelessness, is incrementally stopping the life evolved on their lands. Every extinction is a kind of superkilling. It kills species beyond individuals, "essences" beyond "existences," the "soul" as well as the "body." It kills collectively, not just distributively. It kills the type, not just token individuals. To kill a species is to shut down a unique story, and Americans do not want to play the role of murderers. Americans—their scientists and leaders—have more understanding than ever of the speciating processes, more predictive power to foresee intended and unintended results of their actions, and more power to reverse the undesirable consequences. This generates duties not previously significant in American national life, duties to preserve, where possible, these species. (Rolston, 1985b)

Over evolutionary time, Earth has increased its creaturely kinds from zero to five to ten million species. Several billion years worth of creative toil have been handed over to the care of this late-coming human species in which mind has flowered and morals have emerged. Americans, late-comers on the world scene and explosively developing "their" new world, have recently awakened to the threat to the river of life on their continent, awakened to new duties of preservation, with accompanying benefits. Americans outdoors want these endangered species to be there too, both as national treasures and as something with a claim to care in its own right. When recreation takes place in the presence of endangered species (and few areas are without their species of concern), leisure mixes with serious preservation; recreation again touches creation.

### Philosophical and Religious Benefits

Mountaintop experiences, sunsets, canyon strata, or a meadow of dogstooth violets can generate experiences of "a motion and spirit that impels ... and rolls through all things." (Wordsworth, 1798) The greater outdoors becomes

something like a sacred text, a cathedral. American Indians have held, and still hold, mountains and rivers to be sacred. For wilderness purists intensely, and for most persons occasionally, outdoor settings provide religious experiences. (Graber, 1976; Ehrenfeld, 1976) The wilderness elicits cosmic questions, differently from town. Some of the most moving experiences attainable are to be had there. Those who do not attend religious services can value nature more than those who do. (Kellert, 1979) Church leaves them cold; they are pantheists or nonecclesiastical monotheists. They have a diffuse naturalistic religion, not a supernaturalistic creedal one. They do not like indoor liturgies, but prefer outdoor awe, solitude, vastness. Since the constitution protects religious freedom, so far as the greater outdoors is essential for or facilitates this, it needs preserving. (Rolston, 1985a)

A "man without a country" is a tragedy, but to have a country is not simply to be a citizen of a nation state; it is to reside in a land that is loved. Americans are increasingly an urban people, but, uneasy with nothing but city, are also increasingly aware that their "country" is more than town, city, built environment. This is evidenced in the popularity of outdoor recreation; but the psychological forces run much deeper than those of leisure and fun. Citizens are better citizens who love their landscape—the purple mountains' majesties, prairies and plains from sea to shining sea. Such citizens are less transient and rootless if their souls are integrated with their soil, if they have philosophically and spiritually based emotional attachments to the natural places where they reside. They are better citizens of their nation states because they are citizens of their country in this deeper sense. Patriotism flourishes where patriots have a greater outdoors.

Nature generates poetry, philosophy, and religion, and at its deepest educational capacity, Americans are awed and humbled by staring into the stormy surf or the midnight sky, by overlooking the canyonlands or by an overflight of migrating geese. If we must put it so, nature is a philosophical resource, as well as a scientific, recreational, aesthetic, or economic one. Encounter with nature is a cradle of spirituality. The significance of nature is one of the richest assignments of mind, and this requires detection, imagination, participation, decision. The great outdoors works on a recreationist's soul, as well as on muscles and body.

The mind has evolved for millennia in association with nature, and, although humans cannot escape some confrontation with nature, still modern American life can be lived at such remove from this naturalness that it is "artificial." The universe outdoors can be as necessary as universities indoors for a well-rounded education. Take what are called natural symbols—light and fire, water or rock, morning and evening, the warmth of summer and the cold of winter, the flowers of spring and the fruits of fall, rain and rivers, seeds and growth, earth and sky. How readily Americans put these material phenomena to "metaphorical" or "spiritual" use, as when they speak of life's "stormy weather," of strength of character "like a rock," or insecurity "like shifting sand," of the "dark cloud with the silver lining," or "roots" in this American homeland. How marvelously Lanier could sing of the watery marches of Glynn and the darky of Old Man River! How profound are the psychological forces expressed by the gray and misty sky, the balmy spring day, the quiet of a snow-fall, the calling of loons. How the height of mountains "elevates" persons, and the depths of the sea stimulates "deep" thoughts within! (Rolston, 1979a, 1979b)

The American folk wisdom is routinely cast in this idiom. "Make hay while the sun shines." "What you sow, you reap." "Into each life some rain must fall." "All sunshine makes a desert." "By their fruits shall you know them." "The early bird gets the worm." "The loveliest rose has yet its thorns." "The tree stands that bends with the wind." "Every mile is two in winter." "If winter comes, can spring be far behind?" A larger moral virtue, excellence of character, comes in large part with a sense of attunement that catches the rhythms of the seasons, the passing years, and finds a place under the sun. Encounter with nature integrates people, protects them from pride, gives a sense of proportion and place, teaches them what to expect and what to be content with, and comforts them with the natural certainties.

### Beyond Human Benefits: Intrinsic Values in Nature

Pointed already in this direction by concerns for endangered species and their biotic right to exist, by the wish to leave some wilderness untrammelled by man, by philosophical and religious experiences in encounter with creation, Americans outdoors do not simply reach for benefits that cannot be had indoors, they sometimes reach beyond human benefits to intrinsic values in the natural order. A nation that argues all its foreign policy in terms of national self interest can be prudent enough, but often falls short of being fully moral, since other nations may have some claims on Americans that exceed our self interest. By parallel reasoning, a nation that argues all its policy toward nonhuman lives in terms of national, human self interest, even when politically these creatures live within its boundaries, may be quite prudent, but may fall short of being fully moral—if there are intrinsic values in natural lives that place some claim on Americans outdoors that exceed our class self interest. Like other nations, wild creatures are of value in themselves, not just as resources for our use and pleasure. Encountering the creation, past concerns of recreation, Americans discover that values have been created in nonhuman lives.

The wild creatures defend their own lives, because they have a good of their own. Animals hunt and howl, seek shelter, build nests and sing, care for their young, flee from threats, grow hungry, thirsty, hot, tired, excited, sleepy, seek out their habitats and mates. They suffer injury and lick their wounds. They can know security and fear, endurance and fatigue, comfort and pain. We contact here animal psychological experiences, differently from and yet kindred to human psychological experiences, and there seems no reason to think that humans should value only their own satisfactions and disregard entirely the animal satisfactions, any more than Americans should value their own pleasures and disregard those of people in other nations.

Even plants have biological needs—water, nutrients, sunlight; they can be injured and suffer stress, despite the fact that they feel no pain. Indeed, in this sense, every organism defends its own life. Every genetic set has a program it is set to execute; a life is a spontaneous motion toward such a goal; every organism resists dying and assimilates environmental materials to its own needs, struggling for health and resisting disease. Living things all assert claims on their world; they too use the environment as resource and sink. (Rolston, 1986a)

Nonhuman organisms are not moral beings; only humans can be moral agents. But all living things are in some sense selective systems, and thus are normative



systems that have values on their own, values of their own. They have goods of their kind independently of the question whether these are goods for humankind. Goods for humankind may often override any such goods in the nonhuman fauna and flora; animal and plant goods may often be compatible with the goods humans enjoy outdoors; humans recreating outdoors may often enjoy being let in on these goods of a nonhuman kind. Past all this, one of the benefits to be preserved outdoors is these nonhuman goods—the flourishing in rural and wild places of these lives other than our own. These creatures too prefer their wild outdoors and, sometimes, Americans want their outdoors preserved not simply because it is good for Americans, but because it is good for eagles and bighorn sheep, good for an everglades ecosystem or a salt marsh.

A powerful emotion when leaving culture to return to nature is the sense of entrance into a natural scene that is in place and flourishing independently of any human presence, much less any Americans present. Perhaps these places must be managed and protected, but the forces by which they run are not human much less political forces; they are the biological and physical forces that have generated the world. Wild creatures are selected for their fitness in the places they inhabit; the wilderness is a complex tapestry of values, with each living thing defending itself by the capture of things valuable to itself, and the whole system a network in which goods are circulated round and integrated into other goods though both conflicting and complementary actions.

Nature is a vast scene of birth and death, springtime and harvest, permanence and change, of budding, flowering, withering away, of pain and pleasure, of success and failure, of beauty giving way to ugliness and again to beauty. From the contemplation of it all there comes a feeling valuing life's transient beauty sustained over chaos. There is a music to it all, even when in a minor key. Recreation blends with creation. Americans, having been outdoors, return re-created with the signature of time and eternity.

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