Seekers, Eye-Jugglers and Seers: Ways of Viewing Wilderness

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What I want to address in terms of the concept of my talk are items that involve some of the crucial differences between being an observer and a witness. There is no such thing as a poet who is an observer. People who are called poets are often observers, but in the act of committing true poetry they are witnesses—as many of us are. The witnessing of a poet happens to come out in words which other people sometimes hear or read. The witness is the committed observer—the one who will stand up and say not merely "I have seen" as in a court of law, but "I have been moved", as in the courts of heaven.

The American poet Robert Frost once remarked that the education of a poet is quite unlike that of a scholar. He said scholars can more or
less follow a set path, whereas poets abhor guided tours, preferring rather to walk out into the fields and forests, wandering as their minds wander, and it is only upon returning home that they must bend to the task of plucking burrs from their trouser cuffs or skirt hems. It is these burrs, said Frost, which constitute the poet’s education—the things that stick to them as they pass through life. Thoreau once said he had travelled widely at Walden Pond. In these past few days I have travelled widely too, by listening both to formal talks and informal conversations, and in doing so I have gathered up many burrs.

So I am largely going to abandon the notes I have made up for an orderly and progressive talk in order to address some of these burrs. Burrs, of course, are seeds designed to adhere fiercely and to germinate once conditions are correct for them. Occasionally the conditions for germination are extraordinary, apparently inhospitable, rude even. For instance, a forester from Montana and I were speaking earlier about some of the conditions necessary for a certain kind of pine forest to regenerate itself and how public abhorrence of forest fires had, in fact, retarded the growth of certain forests which require burning to rejuvenate. The poet Gary Snyder notes that there is an alternative: if that particular species of pine cone is eaten and passed through the guts of a bear, that process also will germinate the seed. Process, any process, is complex.

A contemporary American poet, William Stafford, who is something of a sage, once wrote: “Purify the pond and the lilies die.” A pond is a pond, but here it is the natural world as well. Nor does the natural world stay out-of-doors in some abstract external wilderness. The head of pediatric surgery in Galveston, Texas, once told me how, in the old days of the open-air operating theatre, post-operative infections were virtually unheard of. However, once the inevitable ‘improvements’ were made—overhead vents sealed and rooms constantly sterilised by chemicals and so on—infection rates rose dramatically and the dread staph infection appeared, which occurs only under hyper-sterile conditions and is so difficult to cure. Purify the pond and not only will the lilies die but those who appreciate the lilies may be afflicted too. One knows from the Old Testament, if not from the barnyard itself, where lilies spring from most ardent: it is the dungheap. And not only poets and farmers, but scholars as well are drawn to consider such matters. The coprolite, which is fossilised dung, is among the most informative and ancient of texts. There are periods of prehistoric time which, in certain regions, are otherwise wholly lost to us, except for the evidence contained by the coprolite. From its contents can be deduced an entire spectrum of botanical and biological species. When we read the best texts well, we are inevitably reading parables, of course. And the lesson of dung and the lily is an invaluable one.
Poetry, like wilderness itself, never arises out of hyper-sterile conditions. And neither poetry nor wilderness can be defended out of such a perspective. In matters of this sort, matters of values, the equivalent of hyper-sterile conditions is objectivity—objectivity purged of subjective elements; testimony distilled, cleansed and purified of non-quantifiable elements until it is rendered up as facts which are turned into numbers which are fed by specialists into computers where they are further rendered into realms more ethereal and insubstantial than any poet would ever dare to dream. This process is usually defended as one that liberates debate from the confusion of conflicting values and unreasonable passions. But human debate has always been intended to resolve such conflicts and has always been conducted with passion as one of its touchstones of sincerity. The result of such objectivity is not so much to remove the touchy element of values as it is to remove it to a level reserved for specialists. These specialists are most often technocrats in the service of special interests wealthy enough to hire them, influential enough to wield them like the new Class weapons which they are. And we, the people, are in effect excluded from the fray before it has even begun. It is not, in fact, a situation where subjective values have been removed—only the subjective values of unaffiliated individuals. Which is to say most of us.

Objectivity has its role, but it should be a limited one. If we see politics as an arena which we should concede to objectivity and to facts-and-figures thinking, we are, in the long run, conceeding our purposes as conservators of wilderness and wilderness ways. Because, objectively speaking, the governments, corporations, developers and merchandisers have the goods on us. The statistics we can muster are often no more than scraps from their big tables; more importantly, they should be relegated to the secondary position they most properly occupy in the world-wide wilderness crisis. Our concerns are not dollars-and-cents matters, they are matters of values, of passion and spirit.

Poetry does not have a notoriously successful role in politics, in spite of the fact that poets have been called 'the unacknowledged legislators of the race'. Many treaties with Native Americans in the USA were signed with the coda that such-and-such conditions 'shall be so as long as the sun does shine and as long as the grass does grow'—a poetic way of saying 'forever'. Poetic and optimistic, as it turns out. Someone once figured out that the average life of these treaties was eleven years. Often that was long enough, because by then the Indians involved had been weakened to the point of not being able effectively to resist the swelling population of Whites. Rarely if ever are treaties with indigenous peoples anywhere broken to the advantage of those peoples. Nor is it just in the US or only in the past that the clashes between aboriginal peoples and our own civilisation result in such tragically wasteful violations. Nor can we rest secure that the trajectory of our
civilised behaviour toward indigenous peoples is safely contained in history books, from which we may learn our old errors. In Tasmania, for instance, where physical natural resources have burgeoning support, the human natural resources, the aborigines, are sorely neglected; indeed, the official policies toward them are still based primarily upon the demonstrable absurdity that the last aborigine in Tasmania died in 1876, hence there cannot possibly be a ‘problem’ with them.

Bureaucratic thought and language, like air and water pollution, seem to fall inevitably as shadows from all our institutions of progress. I am not against progress but, as an artist whose primary natural resources are language and spirit, I am inevitably aware that certain kinds of progress are, as E.E. Cummings has said, ‘a comfortable disease’. In some cultures the terms ‘poet’ and ‘prophet’ are interchangeable, which I find instructive. One task of a poet is simultaneously to regard the past and the future, bringing them to bear as a vision of the present. This requires not only vast amounts of information but considerable intuition, for deciphering and shaping. Through intellect we may know things and the principles of things, but it is through instinct that we apprehend the spirit of things, especially in relation to ourselves, our spirits. William Butler Yeats says poems must be dug from ‘the rag-and-bone shop of the heart’. By ‘heart’ he means the repository of our own and our race’s history. Or, if you will make the jump with me, the dungheap of the past and the instinctual drives that govern our conscious lives.

The heart is our inner wilderness—our most fundamental raw material, our dungheap and our chief source of psychic ‘burr’. And it is liable to the identical processes of redefinition, manipulation and exploitation that threaten our outer wilderness: the forests, deserts, plains, mountains and jungles we all understand must be preserved. Our struggle to preserve the natural geographical wilderness corresponds to, and must be seen to correspond to, a need to preserve those elements of ourselves which respond to the wilderness just as vegetation responds to rain. A part of these concerns must be an actively compassionate regard for indigenous peoples everywhere, for they are the fuller incarnation of those very aspects of ourselves we are here to protect. The fate we have come to over centuries they must confront in short decades, and they must do so for the most part without the benefit of material and philosophical cushions.

‘The rag-and-bone shop of the heart’ is not a lovely image. It implies the damage of wounds and the dailiness of commerce. Our Earth and its inhabitants are wounded and scarred, and the wounds are many and deep. Few poets now are recognisable as descendants of those ‘blithe spirits’ of the past. Few are easily made happy by the world they find around themselves these days, though fewer still would ever concede that joy is not the natural condition of the human spirit. And when I
say ‘poet’ I mean not simply my fellow practitioners of that art but the poet and lover of wilderness in each of us.

Now whether we look back to the Greeks, to Oedipus the King, who had to know the truth before he could become the master of his tragic fate as the blind seer; or to Freud, Jung or Laing, all of whom counsel us to return to our wounds, our traumas, in dreams and memories coded and dramatised for us by our blind obsessions and neuroses or our plain flatout foolishness; or to Jesus who said over and over that to enter the Kingdom of Heaven one must become as a child again; or to the Stone Age people of the South Seas who heal some maladies of the spirit by literally re-enacting birth—always the message is clear and consistent: truly to go forward, we may first have to go back.

As it is with the individual, so it may be with the culture. Our modern world, the Western European world in particular, is a tower of Babel, the United States even more so than Europe since we rest on European shoulders for the most part. But Europe too stands on yet older, firmer shoulders—not only of Rome and Athens but of Egypt and Mesopotamia, cultures which stand in turn on even older and firmer shoulders which recede into prehistoric times we can only barely grasp in the dim light of our excavations. We are imperilled by our hubris which supposes us to be somehow the fruit which may prosper without roots. Or, to return to the Babel metaphor, we are trying to build our 99th floor without fully acknowledging our foundation—the Earth itself upon which the entire enterprise must finally rest.

I am speaking not only of wilderness the place, but of wilderness the way. Hand in hand with preservation of the place must be preservation of the ways in which it has been lived in, naturally—for virtually all wilderness areas have been lived in. Those ways are best known by the dwindling aboriginal cultures themselves. Only a sorry second-best is to be discovered by the too-specialised scientists, praiseworthy as many of them may be; indeed, the best of them are the first to admit such a sentiment. Holistic interdisciplinary practices are entirely to be applauded and everywhere encouraged so long as they are responsibly exercised, but not even they can begin to restore the context of reverence in which the artefacts and folkways they discover are so firmly mounted. We must show reverence to the elders of our species, many of whom still share this Earth with us and do so all too often in positions that are powerless and despised.

Just what is it that these aborigines have to offer us, and how is it relevant or even important to 20th century people? One of the things it has to do with is the essential nature of human beings, specifically in relation to our seemingly inevitable belligerence toward one another. From our recent history, we derive our fatalistic tendencies to despair not only of our future but also of our past, projecting onto our ancient forebears an image in keeping with our notion of ourselves as basically
savage and brutal. Just how unfortunate this travesty of the human image is we may begin to glean from examining a few of the extant groups, until recently uncontaminated—culturally speaking—by our own ways. The Eskimo people, for instance, had neither a word nor a concept for ‘war’ until we gave them ours. Contrary to the dramatic contentions of Robert Ardrey, who tried to prove that humankind is descended from a killer-ape of sorts, we find over and over again, especially in the past ten or twenty years, group after isolated group of people still living as pre-Iron Age, even Stone Age peoples, in places like the Kalahari desert or the Malaysian islands, who demonstrate incontrovertibly that early people lived (and in some cases still do live) in elemental harmony with the world, preferring peaceful ways when possible. The so-called ‘dream people’ of Borneo lived amongst their hostile neighbours (popularised as the ‘head-hunters of Borneo’) not only without warfare but virtually without crime—two conditions that no modern culture could ever boast of. According to one anthropologist who lived among them and studied them, they are the most emotionally mature people on Earth today. And the ‘gentle Tassady’, as they are called, survived in total harmony with their environment for countless millennia, enjoying the company of any creature who chose to consort with them in their village until the trader who discovered them introduced them to cooked flesh, ending in one hour the balance there which had begun before the first stone was carved for the first pyramid. As such a simple instance shows, these people and their ways are an endangered species, too. Yet, without knowledge of and full respect for their authentic cultural genius, we will soon join them in extinction—first spiritual extinction, then physical extinction which, by then, may not be much resisted. That degradation has, in fact, begun for us. It is what we are here to resist.

I do not wish to fall into the trap of over-romanticising early people. The myth of the ‘noble savage’ is fallacious when made into an article of general faith and is no less misleading than the image of the club-wielding brutal Neanderthal man. Some human strains have treated their environment unwisely and have paid the price of extinction. The Anasazi of Arizona, for instance, vanished over a thousand years ago, leaving, in the form of old garbage pits, evidence that they began by eating all the big animals on what were then plains. They decimated species after species, their prey growing smaller and smaller in successive layers of their dumps until at last they were eating desert rats and finally disappeared. Modern humans have no exclusive option on environmental folly. But what we do have that the Anasazi, for instance, did not have…is the example of the Anasazi.

Some of what I say may seem simplistic, but I prefer to argue that it is elemental. Two stones sitting on the desert may at first glance resemble one another. But if you kick one it flies off, and if you kick the
other you stub your toes ferociously, because it is the tip of a buried mountain. The elemental is that in the human spirit which most resists change. It is that complex of aesthetic, moral and religious impulses all of which are profoundly rooted in the same dungheap fertilising the surface of our one and only Earth. To value what is universally precious in ourselves, we must recognise and take heart from our antecedents, our aboriginal brethren. They are our oldest surviving family. To destroy them or to let them be destroyed is to let our deepest taproots be hacked off.

I am going to read to you from a document unlike most documents we know, and yet the very qualities which distinguish it from the documents we know typify it as coming from the race which gave it to us. This comes from Chief Seattle, in 1854, in response to an offer to give reservation land in exchange for the land of Chief Seattle’s people. I will read the beginning of this speech twice, first omitting some words, then including them. He opens saying, “Every part of this earth is sacred. Every shining pine needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy.” This is beautiful, and yet it is still incomplete. When we read it whole, as it was written, we see what else is required: “Every part of this earth is sacred to my people. Every pine needle, every sandy shore, every mist in the dark woods, every clearing and humming insect is holy in the memory and experience of my people.” As a culture, we cannot yet add those key phrases which make the vision whole and give it its wonderful authority.

Chief Seattle ends his speech with these remarks, which are the conditions upon which he concedes that native ground to the Whites: “You must teach your children that the ground beneath their feet is the ashes of your grandfathers. So that they will respect the land, tell your children that the earth is rich with the lives of our kin.” He talks then about Whites perishing, and he says, “Finally the destiny of the White man who has come to dominate us is a mystery to us, for we do not understand when the buffalo are all slaughtered, the wild horses are tamed, the secret corners of the forest heavy with the scent of many men, and the view of the ripe hills blotted by talking wires. Where is the thicket? Gone. Where is the eagle? Gone. The end of living and the beginning of survival.”

Chief Seattle was a seer, a man who looked past the faces of people and the glittering appearances of our proud culture and looked hard and deep into their hearts instead. His view of the wilderness was not our view, but the view we aspire to. “Whatever befalls the earth,” he said, “befalls the sons of the earth. Man did not weave the web of life: he is merely a strand in it. Whatever he does to the web, he does to himself.” Surely what we are here for is the attempt to reverse this process foreseen over 130 years ago with such terrifying clarity not only in
its details but in its consequences—the end of living and the beginning of survival. That is an irreducible kind of poetry because it is forged of passion and image as well as idea. The visions of the seers on our Earth—be they ancient Hebrew or modern Englishman transplanted to London from Missouri, be they Native American or new American with the vision of a Democratic Vista, be they Kalahari Bushman or contemporary Ugandan or Sudanese or Greek—have an awful and remarkable consistency in what they see and what they say.

What they say is that the universe and everything in it is alive and responsive, and nowhere are there objects devoid of life. Even Pythagoras, who approached poetry by means of mathematics, declared, "Astonishing! Everything is intelligent!" The French poet Gerard De Nerval wrote:

_Free thinker! Do you suppose you are the only thinker on this earth where life blazes inside all things? Your liberty does what it wishes with the powers it controls but when you gather to plan, the universe is not there._

Look carefully in an animal at a spirit alive; every flower is a soul opening out into nature; a mystery approaching love is asleep inside metal....

The great German poet Rilke, writing about the mineral gold, says:

_The ore feels homesick. It wants to abandon the minting houses and the wheels that offer such a meagre life. And out of factories and payroll boxes it wants to go back into the veins of the thrown-open mountain, which will close again behind it._

Over and over the seer-poets from all ages and places who look simultaneously into the inner and outer wilderness show us that it is the wilderness which is wise and incorporates balance, and people who are foolish and who suffer when they fail to follow that model in wilderness which they may always return to and be restored by, if they are willing to be made wise and whole again. And I mean the mountains and deserts of the spirit as well as those of the earth, for they correspond to one another with an immaculate and universal delicacy. Sir Thomas Browne wrote, "We carry with us the wonders we seek without us: there is all Africa and her prodigies in us." But without a real Africa outside us, we would lose the means of portraying, by metaphor, what is within. And humankind, without metaphor or image, without an outer wilderness to provoke and stir and order what is within, would soon bear less resemblance to us than we bear to the Bushmen, as seen through Bushmen eyes.
Not all people and not all poets are seers. This has been the case in the past as well as the present, as attested to by the prevalence among many cultures of the tales of the eye-juggler. Among the Kalahari Bushmen, for instance, the baboon is cast into this role and is said to like to take out its eyes, the primary organ of consciousness, and play with them. In similar legends in North America an Indian will be playing with his eye—not in a frivolous but in a sacred manner—when he is seen by a stranger, often a White man in later versions of the story. The White man will of course want to do it too. But he ignores the warnings involved—namely that the eye, held high in the hand, should only be used to look in the four sacred directions—and lo and behold, he finds he cannot fit his eye back into his head. He is lost.

Eye-jugglers are addicted conceptualisers who abstract ideas from the world and then play with them, becoming addicted to them to such an extent that to exert the power that concepts make possible they cannot return to their hearts. They cannot get their eyes back into their heads, and so play with ideas blindly. They look through ideas instead of through their eyes. Here is an example of a poem by such a one, from An Essay on Man by Alexander Pope:

Lo, the poor Indian! whose untutor’d mind
Sees God in clouds, or hears him in the wind;
His soul, proud Science never taught to stray
Far as the solar walk, or milky way....
To be, contents his natural desire,
He asks no angel’s wing, no seraph’s fire;
But thinks, admitted to that equal sky,
His faithful dog shall bear him company.

The American writer James Fenimore Cooper, one of the first heroisers of the Native American, is another such one. Cooper probably makes more mistakes in his books about the natural world than any other writer has ever made in as many pages. For instance, at one point he has his character tracking someone who goes into a stream to conceal his tracks. So what does our vexed tracker do? He diverts the stream from its bed and doggedly pursues his hapless quarry! Cooper’s books are riddled with such instances, mercilessly pointed out by Mark Twain in an hilarious essay. Many of the fallacies are of this sort, in which an idea or concept becomes so remote from its origin that the thinker imagines the thing itself is susceptible to the same manipulations as the concept is. That is eye-juggling. These are amusing instances, but the same dynamic enforms George Orwell’s Newspeak and the mischief of politicians who persist in discussing such matters as limited nuclear warfare. It is the eye-juggler who estimates the value of a forest or a park in terms of board-feet or the number of tourist
Southwest desert (USA) with native inhabitant at work.
Tribal people throughout the world are a precious and important part of wilderness and society.
contact-hours. Eye-jugglers do have visions of a sort. Unlike seers, their visions are abstract and objective and their purpose is commonly to exploit.

To have real vision you must be able to see; ironically, to see you have to stop looking. The distinction is that when you look you have some kind of intention in mind. You look for or you look at, always maintaining a distinct distance between yourself and what you observe. This is where the third way of viewing comes in, the way of the seeker. When you seek, you are looking for. You look at something with the idea of discovering something else by means of it. You look at a tree and say, “That’s about 200 board-feet,” or “That’s as pretty as a picture,” or “It looks like a dancer in the wind.” In each instance the viewer, in seeking, is superimposing over the tree some projected image or idea, manipulating the reality rather than comprehending it. We here might bristle at seeing a tree in terms of board-feet, but what about as a dancer? Yet once that kind of manipulation has begun, no matter how harmless the original impulse, the process has a way of feeding into further, less harmless categories of manipulation or exploitation.

An example of this is the set of mind which developed during the Renaissance and which viewed wilderness as something raw, something to be improved upon, something to be turned into, for instance, gardens—such as the great gardens of England and France. The belief behind the impulse to transform wilderness into a garden is benign enough. The great gardens of the world were often modelled upon ideas of how the cosmos is formed, a cosmic geometry. But a garden is a manufactured landscape over which we exercise the ultimate shaping and moulding power, which, if you really love wilderness, is a disfiguring power. The extent to which this notion has hold of our imaginations is shown by the term we use to describe great wilderness tracts in America. We call them parks, which suggests they are domesticated and tamed and made suitable for human use. A wilderness park is an oxymoron, a contradiction not only in terms but in values.

Another example—a kind of metaphor or parable—of this set of mind is that of Claude’s mirror. Claude was a popular Renaissance painter of idealised landscapes. The elements which formed a taste for a novelty such as Claude’s mirror played an important part in the education of the aristocracy which would imprint not only the Renaissance era but also much of subsequent Western European culture.

During the Renaissance the classic works of Virgil, Ovid and other Latin poets had been ‘rediscovered’ and formed the core of the curriculum for young gentlemen from England, France and so on who went to study in Rome. The bucolic or pastoral element in these works was strong and influential, but the landscapes recalled by these poets, mostly from their childhoods, tended to be highly idealised ones, as much of the work was written while the authors were in a state of exile
from the places they depicted. Their appeal to the young gentlemen, similarly exiled from their own homelands, was understandable. However, there was little realism among the Latin poets and painters. I don’t mean there should be, only that the scenes are picturesque and lovely rather than awesomely, ruggedly, dangerously beautiful, as true wilderness tends to be. Montaigne introduced the term ‘landscape’ in his essays around 1580, using it to describe the background painting for a dramatic production. So these young gentlemen were imbued with that version of what a natural setting should be: not a wilderness but a landscape, idealised not only by the Latin classical poets but by the contemporary Roman painters who used the classics as models for their scenic paintings.

The students who came to study these works came mostly by coach, passing en route through the Alps but doing so, according to contemporary records, with the shades firmly drawn against the view of the ominous terrain, the wilderness we now find so inspiring. They found it frightening and unfamiliar, something that harboured kidnappers and rogues. And this is where Claude’s mirror comes in. The device named after this landscape painter was a curved mirror which the gentlemen carried when travelling. The surface of the mirror was ground in a manner that made the reflections in it appear to be darkened, as if by a coat of varnish, in a style typical of Claude’s canvases. Upon seeing a likely prospect, the traveller would ask the coachman to stop, would step out of the carriage, turn his back on the scene and hold his mirror up in front of him so he could view the landscape behind him, a scene which instantly became... a landscape by Claude! This is, of course, the forerunner of our polaroid cameras, but it is also a highly artificial way of viewing the terrain. That it required viewers literally to turn their backs upon what it was they wanted to see is, in itself, highly suggestive.

How have we become so far removed from natural wilderness? I will not pretend to have a complete answer, but I will point out this much. Many of our greatest conceptualisers have also been highly inspired people—such as Pythagoras, for instance. But he had a side which has survived into our culture and a side which has not. The maker of concepts has survived, in the form of ideas received from him; but the inspired figure who said, “Astonishing! Everything is alive and intelligent!” is not passed down so easily. That living presence of nature was once common knowledge in our culture, as it still is among many remote peoples. Genius is not a matter of IQ, but of awakened spirit. Genius was one of the three household gods of the ancient Romans, and it was the spirit that was one’s own preserving presence. Not intelligence, but spirit, that ignites when one is inspired. The term ‘inspiration’ comes from breathing in, not merely air but spirits in the air. The twin for that term, the Greek ‘enthusiasm’, means taking a god in-
to oneself, a god’s spirit and power. One takes in the spirits around one, and gives them back into the world as inspired actions or visions which we receive enthusiastically.

Here are some familiar lines from Wordsworth, which are indicative of one of the breakthroughs of the Romantic movement. In these lines from The Prelude we see Wordsworth cracking Claude’s mirror, revealing a wilderness which, because it is imbued with a power not of his making and not under his control, must therefore be capable of threatening him, conjuring in him a sense not of simple loveliness but of awe:

One summer evening... lustily
I dipped my oars into the silent lake,
And, as I rose upon the stroke, my boat
Went beaving through the water like a swan;
When, from behind that craggy steep till then
The horizon’s bound, a huge peak, black and huge,
As if with voluntary power instinct,
Uproared its head. I struck and struck again,
And growing still in stature the grim shape
Tower’d up between me and the stars, and still,
For so it seemed, with purpose of its own
And measured motion like a living thing.
Strode after me...

...after I had seen
That spectacle, for many days, my brain
Worked with a dim and undetermined sense
Of unknown modes of being...
...No familiar shapes
Remained, no pleasant images of trees,
Of sea or sky, no colours of green fields;
But huge and mighty forms, that do not live
Like living men, moved slowly through the mind
By day, and were a trouble to my dreams.

In this passage, the poet is seeing, not merely looking, and though what he sees disturbs him at the time, as the unknown usually will, it is through this crack and others which he is brave enough to peer through that a new way of viewing wilderness begins to emerge.

The concluding section from a piece of mine called Light In A House of Mirrors is my response to the La Push area of Washington’s coast where there are tall rock stacks that have a very eerie presence. Although there is a kinship with the spirit of Wordsworth, this prose passage is based upon a Native American legend, and is a confirmation of his vision which is parallel with it rather than derivative from it:
Once there was more land, higher than now. The waters grew jealous, gathered their tribes and conspired. Men knew this and the greatest planned to flee inland, leaving the others—the sickly and the weak—to form a wall to hold back the waters. So there they stood, and the waters were delayed before they rushed inland. Today we can see the heads of the old ones at the shore here, vast, moss-haired, silent—for these were the runts, the least of their race—and we feel dwarfed beside them. For the greatfathers, who were saved, shrivelled among the safe places far inland. The heroes still stand guard at the edges. We call them stones so we will not remember. They no longer speak to us, who are neither their sons nor daughters.

If in this passage and the earlier one from Wordsworth there is a sense of ominous oppression in response to the enormous powers of nature, both human and non-human, that is not necessarily the case. Here is Walt Whitman, in Song of Myself (which is really a song of the human spirit possible in us all, aroused to a natural condition of joy) describing a sunrise as it has never been described before:

_To behold the daybreak!_
_The little light fades the immense and diaphanous shadows,_
_The air tastes good to my palate._
_Hefts of the moving world at innocent gambols silently rising,_
_freshly exuding,_
_Scooting obliquely high and low,_
_Something I cannot see puts upward libidinous prongs,_
_Seas of bright juice suffuse heaven...._
_The mocking taunt, See then whether you shall be master!_
_Dazzling and tremendous how quick the sunrise would kill me,_
_If I could not now and always send sunrise out of me._
_We also ascend dazzling and tremendous as the sun,_
_We found our own O my soul in the calm and cool of the daybreak._
_My voice goes after what my eyes cannot reach,_
_With the twirl of my tongue I encompass worlds and volumes of worlds...._

This is the poetry of the grandeur and magnificence witnessed by the visionary seer of the wilderness, the one whose spirit responds in kind to that glory it beholds. "Speech," he says, "is the twin of my vision." It is the vision which makes him a seer, the speech which makes him a poet, and the poetry which makes his spirit contagious among us all. We come to such a poet as we come to the wilderness itself, to have refreshed and confirmed in us again and yet again the knowledge of our own true stature which is not subject to the erosions of abstraction and exploitation so long as we are willing to resist them—and so long as we have the wilderness to empower us with the spirit to resist effectively. In the service of such a cause, neither the poet nor the politician may stand aloof. We must join hands with each other by joining voices whenever and wherever we can.
Song of Returnings

All the bones of the horses rise in moonlight
on the flatlands and hillsides, dropping
from trees, squeezing out from
under rocks, disengaging themselves
from the earth and things that live from the earth
and the scattered uniforms assemble
to the sounds of bugling come back from the stars
and what has rotted into dust reforms with a furious sound
of whirlwind tearing the faces of the astonished living
and gold flows molten from the mouth of Cortez
and returns to the stones and the water and the air
and the redwoods collapse back into cones
and Christ is pried from the cross and flogged and spat upon
and let loose among fishermen who scatter to their ships
and enters his mother's womb and enters into the stars
and Babylon reassembles and Sodom and Gomorrah reassemble
and David sings then babbles in his mother's arms
and all living things return to their sources
and the waters return to their sources
and the sun returns to the source
and the vast darkness returns
and all things are
and are not.
The Essence of Nature

Dorothy Maclean

I have always loved nature and being outdoors. Because of that love I was later in life given the task of harmonising with the essence of nature. While this may be a little unusual, it is not new, and many speakers here have addressed that subject. I would like to quote a few of them.

'Man is not fulfilled until he understands the essence of nature'—'The human mind can blend with the great mind, and there are no limits to knowledge'—'The potential of man is unlimited'—'Wilderness is the original cathedral, the original temple, the original church'—'Perception, understanding, is only possible in the flow from the macrocosm to the microcosm'.

To some, these ideas may sound just beautiful or poetic, even impractical. They are the types of ideas I have explored and tried to bring into my everyday living, and I have found it is the practicalities of life that have taught me most. My exploration began in earnest at a very difficult period of my life when I was divorcing my husband, the person I loved most, so he could live his own life more fully. I was trying desperately to love unpossessively and finding it very difficult. But at that time I had a peak experience of knowing—not hoping, not believing, not just having faith—but knowing that God was within.
This completely changed my life, so much so that even friends who I met the next day noticed a difference in me. So powerful is it to touch just the fringes of our own divinity. This experience gave me a tremendous background to go on from, and later when I was living alone a thought kept coming to me: “Stop, and listen, and write down.” At first I paid no attention, but it was so persistent that I eventually did as it suggested. And I found myself in touch with this still, small voice within, which gave me the most wonderful inspirational thoughts. I would put them into English with the aid of a dictionary and a thesaurus beside me.

This led me into a tremendous period of going into the dimensions of the human soul and of exploring what great beings we are in our inner selves. I always emerged from these experiences a happier and more loving person. This blending and teaching always brought me back to everyday living; it never took me out of it. It led me to try to do everything in my daily life in the consciousness of that oneness that I was experiencing within.

After many adventures and learning experiences, I found myself in this caravan park at Findhorn in Scotland with Peter and Eileen Caddy. One morning in May 1963, during my normal morning meditation, I was told I had a job to attune to nature. “Well,” I thought, “this is a wonderful opportunity to go for a walk.” But when I told Peter about it, he said I should help with the garden. He was having a lot of difficulty trying to grow vegetables in sand. So the following morning I asked about this in meditation and was told that I was indeed to help with the garden, but I was to realise that everything in nature had an ensouling intelligence, and my job was to attune to and harmonise with that intelligence. My immediate response was to argue because I didn’t think I could do it. I had no idea of who these intelligences were or how to contact them—and in any case how could I attune to something I didn’t even know existed?

However, I had had ten years of inner attunement by then, and I had learned to trust it. So a few weeks later, when I found myself in a very deep meditative state, I thought I would attempt attuning to these beings of nature, whatever they were. As Peter needed help with the garden, I decided to try with a vegetable—in this case, my favourite vegetable, the garden pea. I tried to tune in to the essence of that, and to my surprise I got an immediate response in thought and feeling which as usual I translated into words and put down on paper. The being said it had been going about its business and it wished human beings would go about their business the way it did, because we were great beings of light and we weren’t using our potential.

When I shared this experience with Peter he immediately gave me a long list of questions to ask about the garden, and in fact he kept me busy for about two years. They were ordinary gardening questions, and
I am not going to go into detail about that here, because it has all been written up elsewhere.

From my very first contact with the essence of the garden pea, I realised that I was contacting not an individual being behind a particular plant, but rather the group soul of a species. The only word I had for this in my vocabulary was angel—or the Sanskrit term ‘deva’, which means ‘shining one’. I experience these beings not as form, but as an energy field. They hold the archetypal energy and pattern for growth on the planet, from plant growth to human growth, and in that sense they are, in a way, our parents. I also came to realise that I was tuning in to a knowledge that every culture and religion has talked about in the past, including Christianity, which has a whole science of angelology that is not even translated from the Latin.

The angels gave us facts and practical advice about gardening, but they didn’t tell us what to do. I believe that was deliberate, for two reasons. First, I found that these nature beings do not have free will. They are at one with the whole rhythm of divinity and have always stayed in the Father’s House, so to speak. I think the other reason is that they want us to make our own decisions, because the human way is to learn by our choices, and if they told us what to do we would just be robots.

Through my inner contact with the angels, I began to understand many things. For instance, when I attuned to the intelligence of the species we call wild violet, I found that the power and authority evoked by one tiny flower in the grass of the sand dunes was greater than that of the most cherished garden flower, simply because it was wild. The being told me the reason for the plant’s power was that it had found its niche and was doing what it was meant to be doing. It said when we humans found our own place and purpose, we would be just as powerful.

From the angels I also learnt about my human self. Whenever I tuned in to them I would partake of their qualities and it was like a tuning fork effect—I would feel, for instance, their sense of joy and would resonate with it and so become a more joyful being myself. I realised that I must have those qualities within myself or else I couldn’t recognise them outside myself—just as faults I see in others must also be within myself for me to recognise them. I realised that we human beings contain all the angelic qualities and capabilities; in fact, we too are angels, every one of us, although working differently to the angels themselves.

As each new plant was brought into the garden I would welcome the angel of that species. I got quite a shock when I first tuned into a tree—a little cypress seedling, one of several we were planting as shelter around the garden. All the messages I had received from the different angelic beings behind the species were helpful, philosophical, loving and to the point, but this one had a very different feeling. The angel had a definite message to give, and I share it with you here:
We come in with a lordly sweep, for we are not just the small trees you see in your garden, but denizens of the magnificent spaces of great hills in the sun and wind. We put up with being hedges, but always in our inner being is the growing towards the open sun-kissed places where we stand out in clustered grandeur. You feel in us an almost intolerable longing to be fully ourselves. We in the plant world have our pattern and destiny worked out through the ages, and we feel it quite wrong that we and others like us are not allowed to be because of man and his encroachment. Trees are not so much doers of the world as be-ers. We have our portion of the plan to fulfil. We have been nurtured for this very reason and now in this day and age many of us can only dream of the spaces where we can fulfil ourselves. The pattern is ever before us, out of reach, a dream that we are forever growing towards, but which seldom becomes reality. The planet needs the likes of us in our full maturity. We are not a mistake on the part of nature; we have our work to do.

Man is now becoming the controller of the world forests, and is beginning to realise that these are needed. But he uses silly economic reasons for his selection, with no awareness of the planet's needs. He should not cover acres with one quick-growing species, which, although admittedly better than none, shows ignorance of the purpose of trees and their channelling of diverse forces. The world needs us on a large scale; perhaps if man were in tune with the infinite as we are and were pulling his weight, the forces would be balanced. But at present the planet needs more than ever just what is being destroyed—the forces that go through the stately trees. We have been vehement. Here are these facts of life and no-one to listen to them. We have rather dumped this on you: though you feel at one with us, you feel unable to help. You are only looking at it from a very limited view. We know that the very telling of this to you does help—that a truth once in human consciousness then percolates around and does its work, and we feel the better for communicating. Let us both believe that the Almighty One knows all this better than both of us, and that something is being done.

Whenever I tuned in to a tree, I got a variation of this theme—the need for trees on the surface of the Earth. For example, the angels told me trees are the skin of the Earth, and that if more than a third of the skin of any being is destroyed then that being perishes. They said they have a job to do in their maturity, to do with the channelling of forces. And just as a child cannot do the work of an adult, so an immature tree cannot do the work of a mature tree. In many forests trees are often cut down before they are allowed to mature and to develop their canopy. The tree angels also said they had a special gift for humans in this troubled and chaotic day and age—they can give us mental stability. For this reason, they suggested that we build large forests beside our cities.

I showed my tree messages to Richard St. Barbe Baker, the Man of the Trees, when he visited the Findhorn Community, and he said he had come to exactly the same conclusions through his own knowledge and experience of forestry.

Later, when I was living in America, a workshop was arranged for me with men of the Washington and Oregon Forestry Service. After hours of busing and backpacking, I arrived after dark in the canyon
where the foresters were working. After eating I had to talk around the camp fire. I couldn't see anyone as I told them what the trees had been saying to me, and when I finished there was total silence and everyone quietly went off and got into their sleeping bags. I spent most of the night wondering if they thought I was quite mad or whether they were so awed they couldn't speak. But during the following two days I spent in the canyon each man came up to me individually to thank me for what I had shared. They said they had joined the forestry service because they had understood these things as children, but had forgotten them, and they were grateful I had helped them remember.

There are of course other, less happier stories. I visited the groves of redwoods in California, where a little plaque says these groves have been set aside in perpetuity. I looked up and could see that the trees were already dying—dying because we have destroyed and polluted their climate, put roads through their area and dammed the rivers that feed the alluvial soil they need.

Another important area of contact for me has been with the mineral kingdom. My first experience of this was when I decided to tune in to the being of a very pretty pebble I picked up on the Findhorn beach. As the mineral kingdom in our human classification is of a lower nature than the animal and vegetable kingdom, I thought I would get a very unevolved angelic being, but instead I got the greatest being I had yet contacted. It stretched across universes, and I called it the Cosmic Angel of Stone. I would like to share its message with you.

Yes, I whom you have contacted am concerned with vastly more than your planet, for I contain or am connected with mineral life existing in various stages throughout creation. Nature is full of paradox, and when you seek contact with what you consider a lower form of life, you in fact contact a more universal being. The mind of man codifies and formulates, which is within its right and purpose, but forgets that all is one and that God is within all, and that basic substance, seemingly most devoid of sensitive consciousness, is held in its state of existence by its opposite, too vast for you to do more than sense its fringes and know that it extends beyond your present imagination. You realise too that dense matter is influenced in its make-up by stellar energies.

It was the beauty of this particular stone that drew you to me. Beauty is of God, beauty is working out on all levels; consciousness of beauty brings you into contact with any part of the universe. You are contained in it just as I seem to contain universes within myself. The more you appreciate beauty the more you are linked universally. It is good to seek it on high levels, for then your consciousness is expanded. You feel right now that you can only look at every pebble with the deepest reverence and worship because it is part of my vastness. We are glad that in this way you have been shown a very little of the glory of God. The glory of God is everywhere, stretching from the furthest reaches of the universe to the little grain of sand, one and the same thing, held in eternal love and timeless with life.

Yes, of course it would be good for you to attune to me if you work with stone—reverence all life, emanate my patience, unfold the mysteries of God and even of pebbles. Do it as a learner of life, a revealer. Let your dominion be
over yourself, and let your expanded consciousness seek God's life in all things, for indeed it is and, as you have learned, in the most surprising things. The colour and sparkle of a stone is wonderful, but more wonderful is consciousness which brings about these outer manifestations and grows cosically. We are all part of one life, no higher or lower. Praise God in the vastness of all life.

Our relationship with the mineral kingdom is one in which we have much to learn. The next experience that made an impression on me was when we in the Findhorn community borrowed a bulldozer to flatten a piece of ground on which to put a print shop. I had been away for the day and when I came back I felt very upset about the churning up that the bulldozer had done. I felt it was all wrong, and it seemed that the nature forces were withdrawing. So I contacted a being which I had made a connection with earlier, the Landscape Angel. It seemed to be in charge of the whole area.

The Landscape Angel asked whether we had thought of warning the plants that were going to be bulldozed. Had we thought there might be beings living on the surface of the earth and that we would be destroying their homes? Had the person who drove the bulldozer thought of doing it with love, and specifically attuning to and becoming one with the machine? The answer to all these questions was no. We apologised and, because of our ignorance, we were forgiven and the nature forces returned. It seems that when we do destructive things in ignorance, the nature realms will accept that as a temporary step, but not when we learn and become more knowing, which is our destiny. We cannot be forgiven as long as we know. And we are now coming to the point where the planet is giving us feedback on our ignorance, and we have to act on it.

Another experience I had with the mineral kingdom was when I went to California and lived in an apartment in the last building leading to a deserted little valley in the Sierras. Of course I tuned into the angels there, and for the only time ever in attuning to them there was a sense not of joy but of frustration. This was because of our treatment of the soil, particularly in North America. We have come in and raped the land, paying no attention to its value. This is in contrast to the previous treatment of the land by the North American Indians, who had a wonderful contact with it, and these angelic beings had been used to having sympathetic humans there. It is also in contrast to the treatment of land in Europe, where people and nature have grown up together very closely. You can see this by how the roads and buildings in Europe are often bonded together. People have listened to nature and have taken the land into consideration. They have tried to keep it in good heart, through various ways of treating the soil, letting it lie fallow and so forth. This was not done by the White people in North America, because there was so much land they did not feel it necessary. And what the angelic beings may have known that I did not was that
the bulldozers were to come into that area the following year.

There are a few points I wish to make which I think are relevant to this Congress. First, nature has a soul level, just as we humans have. On that level, we are one. On that level, both we and they are all-knowing. Second, we humans contain in our make-up all the life of the planet—mineral, vegetable and animal qualities, as well as our human and divine qualities. Third, it is practical to function from that all-knowing level of nature. The original Findhorn garden was an example and became known for its vibrant and abundant plant life.

I think we in the Western world need to stop and listen. We cannot become aware of our higher dimensions if we are too busily focused on the outside all the time. We have to stop and listen to nature because that is where we can learn. But we need to listen to silence too. We need to listen to both the sound and the silence of nature.

I believe we can find the answers to all our human and environmental problems from that inner level of ourselves. Unless we have a contact with the higher nature of ourselves we are not going to bother to try to find answers, because it is only from a higher consciousness of the need and the wholeness of nature that we are then going to be able to use our minds to find solutions.

We are divine beings and have the capacity to create heaven on Earth. We have created something of a hell. My experience is that even the nature angels consider our present creations as part of our learning process. They see and believe in our capacity to remedy our mistakes. They see that we are great beings of light, and they know we can find answers by using our minds. Our minds are the instrument of our intuition, and as we work from the higher level of ourselves we can work directly with the angelic realms.

One more point is that wilderness is necessary. In the wilderness, nature forces are at their strongest. We need wilderness areas to help us remember who and what we are. The purity of nature awakens the purity within ourselves. The peace and beauty and life of nature is essential for our well-being, and any scheme that takes us to the wilderness can take us to God and make us whole.
A Spiritual Vision
for Nature and Society

George Trevelyan

Throughout history, nature has been the singularly most consistent inspiration for the arts.

Let me begin with a poem by Gerard Manley Hopkins, written by a burn which runs into Loch Lomond in the great Scottish Highlands. Let your imagination work with the images it calls up.

This darksome burn, horse-back brown,
His rollrock highroad roaring down,
In coop and in comb the fleece of his foam
Flutes and low to the lake falls home.
A windpuff bonnet of fawn-froth
Turns and twindles over the broth
Of a pool so pitch black, fell frowning,
It rounds and rounds despair to drowning.
Degged with dew, dappled with dew
Are the groins of the braes that the brook treads through,
Wiry heathpacks, fitches of fern,
And the bead-bonny asp that sets over the burn.
What would the world be once bereft
Of wet and wildness? Let them be left,
O let them be left, wildness and wet;
Long live the weeds and the wilderness yet.

Imagination is not mere fantasy and unreality. It is the first step into initiation knowledge of the invisible and higher worlds. Remember Keats' affirmation: "I am certain of nothing but the holiness of the heart's affection and the truth of Imagination."

Come with me now on a brief imaginative exercise. Go up into a high valley before dawn and look with the inner eye of imagination at the light behind the purple hills just before sunrise. Wait in that great silence. Now see the rim of the sun break the horizon and finally clear the mountain tops. The sun has risen.

But what nonsense is this? The sun doesn't rise. That is pre-Copernican thinking. The sun stands still and the Earth spins around it. Now go back to the same picture but with a new understanding. In your imagination roll the planet over into the sunlight. Speed it up till the sun is above us and on till the sun disappears and all the stars come out—a majestic roof fretted with golden fire. You are still grounded in your body, but in imagination your consciousness has embraced the whole globe. You can sense its weight and feel it turning and rolling.

Now, greatly daring, free yourself from your body to float out into orbit and look down upon the planet. See it as Edgar Mitchell did when he came out from behind the moon and saw the beautiful orb of blue and silver against the velvet background of space. At that moment he had a peak experience of knowing, noetically and with inner certainty, that the universe is mind, not mechanism. It is a living oneness. Your consciousness is expanding among the stars and the Earth is turning. Zoom out so that the Earth reduces to the size of a football. What has happened? Your consciousness has enlarged vastly. Realise in actual imaginative experience that your consciousness can be co-extensive with immensity. Furthermore, you can look round that Earth and see it three-dimensionally. Look at it in its beauty. Put out an etheric hand to touch it, let it turn within your extended hands and bless it. See that humanity is part of the planet, anchored into the world of gravity. Gravity is one pole, but everything has polarity. The opposite pole is one of expansion, lightness and levity. There is nothing except our own separatist thinking to stop us stepping out into the consciousness of the great oneness. In a modest way, this is what we are now doing. Something immensely important happens when we exercise our true power of imagination. Wordsworth gave us a hint of this when he said, "An auxiliar light came from my mind, which on the setting sun bestowed new splendour."

In the last three centuries, since Newton's time, we have developed
the intellectual faculties of the left hemisphere of the brain, with its masculine organising power and its pride in controlling and even ‘conquering’ nature (a terrible phrase). But the price we have to pay is enormous. It is the atrophying and going dormant of the organs of perception associated with the right hemisphere of the brain, the feminine, sensitive, intuitive faculties which can apprehend the living oneness of life and spirit. Blake, that great visionary poet, tells us of this price when he talks of the “wrenching apart of the perceiving mind and what we perceive from their original indivisible unity, to produce an externalised, fixed, dead nature and a shrinking of our humanity from the boundless being of the Imagination, into the mortal worm of 60 winters and 70 inches long.”

We have shrunk and withered like an uprooted plant, and have lost the ‘being’ within nature. But listen now to Wordsworth in the great poem _Tintern Abbey_, describing how, as a boy, nature to him was all in all.

...the sounding cataract
Haunted me like a passion: the tall rock,
The mountain, and the deep and gloomy wood,
Their colours and their forms, were then to me
An appetite.... That time is past,
And all its aching joys are now no more,
...other gifts
Have followed....and I have felt
A presence that disturbs me with the joy
Of elevated thoughts; a sense sublime
Of something far more deeply interfused,
Whose dwelling is the light of setting suns,
And the round ocean and the living air,
And the blue sky, and in the mind of man:
A motion and a spirit, that impels
All thinking things, all objects of all thought
And rolls through all things....

But you are still out in space. Now look at the Earth holographically. You know that when a holographic plate is shattered, every fragment contains the whole three-dimensional picture. When Professor Carl Pribram was lecturing once in America, he suddenly stammered and checked in the reading of his paper as the thought hit him—“My God, what if the whole universe is a hologram!” If indeed it is, it follows that every human mind is a tiny bit of the shattered plate. This reminds us of the myth of Osiris, the god who was cut up into a thousand pieces, to be set together by the goddess Isis. However, while the holographic plate is inert, we human beings, a little lower than the angels and crowned with glory and honour, have the unique task of carrying the
divine gift of free will in order that we may become in time co-creators with God. We are that part of nature which can become consciously creative and therefore can, to some small degree, re-create the photograph in the cosmic hologram.

It must be a source of excitement for the angelic world to watch the planet Earth as human beings begin to be creative and overcome their destructive egoism and violence. For we are called on to realise, in time, the true archetype of the human being, that first concept formed in the divine mind before matter came into manifestation. We were the measure of all things, made in the image of God, with the ability to carry and focalise Thought, Will and Love; spiritual beings entering the temple of the physical body in order to experience and overcome the limitations of matter and the sense world. This of course involved for the time being the losing of the realms of spirit and the experience of separation and loneliness, cut off from the divine.

But we are now passing through the phase of separation. We are living in the time when humankind stands on the threshold, when our self consciousness can take a quantum leap into cosmic consciousness. In this training ground of Earth we are reaching a stage when, so to speak, we are preparing to enter the university. This is the intense excitement of our generation. We have recovered the concept of oneness. With our intellects, we have dissolved matter into energy. Our leading scientists now approach the next step, which is to realise that energy is alive, that it is an ocean of life, being and intelligence poured out from the divine source.

This is, of course, not new. We are recovering the vision of the mystics of all ages, the ageless, ancient wisdom both of the Orient and of our Western mystery traditions. The so-called Hermetic Wisdom, deriving from the Egyptian initiate, Hermes Trismegistus, laid down as first principle that the universe is mind, not mechanism, and that everything manifests the law of correspondences—as above, so below; as in the macrocosm, so in the microcosm. The human being is the microcosm reflecting the macrocosm; in essence a droplet of divinity and therefore immortal and imperishable. The essential being, the I, always was and always will be, and cannot possibly die, since it is an attribute of God. This immortal self is housed in the perishable body, truly a fantastic temple for the spiritual entity to operate in the heavy density of matter. This concept is of paramount importance in our death-ridden culture, and in this turn-about in consciousness we see that humanity is not an accident of chance natural selection, but is one of the great purposes of God.

We are now grasping the holistic world view, first put forward in the 1920s by Jan Smuts of South Africa. ‘Holism’ implies, by its spelling, that the whole is holy. We are recovering this concept, held virtually by every culture but our own, and central to the secret knowledge of
the mystery traditions. Therefore look again at our Earth in its beauty and conceive that it is truly a living creature, a being, an organism with its own breathing, bloodstream, glands, sensitivity and intelligence. We are an aspect of the intelligence of the planet. Furthermore, we must see that humanity is itself an organism, integrally part of the whole of nature. Ours is the first generation which could grasp this thought. Teilhard de Chardin’s noosphere is a living body over the face of the Earth and we are each cells in the one great body. When cells in our physical bodies choose to ignore the programming of the whole and go off on their own, we call it cancer. Similarly, when human cells in the body of Earth act out of egoism, greed and violence, and go off on their own reckless way, the Earth itself becomes cancer-ridden. The disease is far advanced, though not necessarily terminal.

We are polluting the planet, physically, mentally and morally, to the extent where we could bring about the extinction of our civilisation in the years ahead. But a change is taking place. More and more human beings, cells in the body of humanity, are stopping in their tracks, appalled at what the rightful stewards of the planet are doing to their mother the Earth. They are pausing, awakening, attuning and re-orientating. This is what Teilhard called ‘homing upon the Omega point’, lifting ourselves above the murky atmosphere of emotion and egoism surrounding the Earth into the clear light of heaven, and realising our true nature. The great hope is that when a critical number of people have consciously taken this step, a new understanding could shoot through the world. For when individual human beings freely take this step in attunement, it is immediately possible for the powers of the angelic world to pour through them to cleanse and purify our polluted planet and to harmonise all life. Teilhard called it ‘the wild hope that our earth is to be recast’. There was never such a time to be alive!

Now it is time to come back to Earth. Take a plunge into the atmosphere, and turn once more with the Earth, seeing the stars appear to swing around you. Now dive back into your waiting body. This is almost an alarming experience, for you are undergoing something like the drastic limitation involved in birth, descending from the widths of space into the sense world. And this could be a relief. As T.S. Eliot wrote: “Humankind cannot bear very much reality.” The Earth, to you, is now flat and stands still, and the sun begins to rise and the moon to set.

What has all this to do with the preserving of wilderness in the living Earth? Because we are part of the Earth, we are not mere onlookers observing nature. We are nature, and we represent an evolutionary point where nature becomes conscious of itself. As Wordsworth and the great poets of the Romantic Movement realised, nature is not fulfilled until human beings, the crown of creation, take the step in

← Sitka Totem (Alaska)
consciousness to grasp the Idea, the Being within the tree, the plant, the bird, the mountain. This gives new meaning to the statement in Romans 8: "The created universe waits with eager expectation for God's sons to be revealed," and to the opening of St. John's gospel: "In the beginning was the Word, and the Word was with God, and the Word was God...All things were made by him." First came the Divine Idea, the archetypal creative Thought, to be realised later in substance. The Divine Idea is present everywhere, expressed into nature's forms, but this world of being and spirit is invisible to the physical senses. It is through the eye of the mind that it is apprehended. The mind, as droplet of the eternal mind, can, to use Blake's words, "open the eternal worlds, open the immortal eyes of man inwards into the realms of thought, into eternity, ever-expanding in the bosom of God, the human imagination."

Now consider also the deeper significance of the magnificent achievements of the younger generation in the so-called adventure sports, in which great feats of enterprise, endurance and skill are accomplished in exploring the world. You do not need any particular mystique to enjoy mountaineering, skiing or gliding; your motive may be fun and sheer excitement. But if you start thinking holistically and realise that we are the point of consciousness of Earth, a deeper meaning is revealed in the great sports and their exploration of nature. Through us, Earth herself is taking a step in her consciousness of the elemental world. In hang-gliding and free-fall, we relate closely to the element of air. In skin-diving, canoeing and surfing, we identify in consciousness with the element water. As we climb on rock and snow or explore great caverns, we relate to the element earth. The planet is waking up through us, for we are the point of advancing consciousness. When Wordsworth walked the Lake District in love of its beauty, he was awakening nature herself. Nature is not fulfilled until we take this step in consciousness. Her dormant spirit awakens as humanity recovers the Hermetic vision and begins to live by it.

This factor is not taken into account in our politics, economics or even ecology. There is of course no need for this mystique, but those people planting trees, stopping pollution and preserving the beauty of landscape and wilderness are all serving Gaia, the goddess of Earth. The so-called 'alternative lifestyle', which grows directly out of holistic thinking, is concerned with living in a way that serves the living Earth. It is conservation, with spiritual vision.

Holism implies, indeed, that there is a power of higher intelligence which could actually bring about molecular change to depollute the planet, but this will not happen without our invocation and cooperation, since we are instruments of freedom. Ours, however, is the initiative, and our age is one of real science fiction in which, through a time of change, almost anything is possible. Glory be!
To close I give you a poem which I dedicate to Sir Laurens van der Post, a great and distinguished man. It is by a great mountaineer, Geoffrey Winthrop Young, who lost his leg in the First World War and then climbed the Matterhorn with an artificial leg. Such was the scale of the man. His poem is called Envoi.

I have not lost the magic of long days:
I live them still, dream them still,
Still am I master of the starry ways,
And freeman of the hill.
Shattered my glass, e'er half the sands had run—
I hold the heights, I hold the heights I won.
Mine still the hope that bailed me from each height,
Mine the unresting flame;
With dreams I charmed each doing to delight;
I charm my rest the same.
Severed my skein, e'er half the strands were spun—
I keep the dreams, I keep the dreams I won.
What if I live no more those kingly days?
Their night sleeps with me still.
I dream my feet upon the starry ways;
My heart rests in the hill.
I may not grudge the little left undone;
I hold the heights, I keep the dreams I won.
I bring you unofficial greetings from all the heretics within the Church—from all those who, despite official Church attitudes, are passionately concerned about the preservation of the environment. As a member of the clergy of 20 years standing I want to say to you on behalf of the ecclesiastical establishment, mea culpa. I want to confess before you that the Church has sinned grievously over the centuries by being the main instigator of the split between nature and grace, matter and spirit. Sir Laurens van der Post has asked: what is it uniquely in us in the West that has made us so brutally savage towards nature? I can tell you: 2,000 years of dualistic Church indoctrination.
Professor Lynn White’s famous essay *The Historical Roots of our Ecological Crisis* traces this dualism back to the seventh century. I trace it back to the third, to St. Cyprian, the man who was canonised among other things for saying “There is no salvation outside the Church.” Cyprian also said, “He can no longer have God for his Father, who has not the Church for his Mother.” He formalised what the Church had been coming to believe for 200 years: that Mother Nature and Mother Earth had no place in the Christian religion, and that their place had now been taken by Mother Church.

From earliest times, Christian theology did not believe that God’s grace extended to creation. There was no covenant of grace for nature. She was excluded, outside the scope of redemption. Theological orthodoxy, with a few exceptions, could be stated like this: “When you are born, you are in a state of nature, which is a state of darkness. You share that darkness with the whole of creation. Then, through the preaching of the Word, you receive the good news that Christ has saved you from your sins, that you have been redeemed from your lower nature and from nature as such, and have been received into the realm of grace and light.” The unique dispensers of this truth were the Church Fathers. What they said was ‘gospel’. The one thing you could not do, on pain of excommunication or even death, was question the Church’s doctrine of the Church. It was all-mighty, all-powerful. It was effectively the third person of the Trinity, the Holy Spirit being identical with the spirit of holy Mother Church.

The Church justified the exploitation of nature by quoting texts from Genesis where God said, “Fill the earth and subdue it; and have dominion over (it)”, as if these were representative of the whole of the Bible’s teaching about creation. Indeed, as far as nature was concerned, the command to ‘subdue the earth’ came to be synonymous with the Christian message. This text, more than any other, has justified the contempt with which Western people have treated their fellow species on this planet. It is so deeply ingrained in our consciousness that many conservationists honestly believe that the whole of the Bible must be rejected because of its anti-nature teaching.

But this is not the case. The Church was quite wrong ever to suggest that these texts were typical of the biblical position as a whole. They come from a time when the Israelites were learning to be farmers after being hunter-gatherers and, in such a context, it was appropriate to speak of subduing the earth. But even if we admit that these texts are, on the face of it, anti-conservationist, they are very few in number compared with the many which speak of God as the creator of and carer for all things, of humankind as the stewards of his creation, of the heavens declaring his glory and the Earth his handiwork, of nature itself revealing the divine character as in the parables of Jesus, of even the sparrow’s fall being noticed by its maker, and of the numerous injunctions
in the Law and the Prophets to live in harmony with the land and to
treat it as a potential Garden of Eden.

If we can ‘deschool’ ourselves from traditional Church indoctrina-
tion and go back to the Bible itself, we will find that it is very much for
the conservation of nature, both in its cultivated forms and in the wild.
We will find that it is for stewardship, not subjugation. Indeed, so
much is this the case that it is possible to say that a new gospel of
harmony with creation awaits those who have the diligence to find it.

I would like to offer one brief example of what I mean, and I choose
the paradigm of the Temple, which is central to the Bible. I am think-
ing especially of Solomon’s Temple (figure 1). The measurements
of this temple, the focal point of Hebrew religion and national life, cor-
respond to the ratios of the perfect musical intervals which, according
to ancient cosmology, were the microcosmic expression of a
macrocasmic harmony. The furnishings of the temple—the seven-
branch candlesticks, the table of shewbread, the altar of incense, the
cherubim, the palms, the cypresses, the flowers in bloom and the Ark
of the Covenant—were symbolic representations of the main features of
the Garden of Eden—a model of the natural harmony which was sup-
posed to obtain throughout the land of Israel. The seven-branch
candlesticks represented the trees of life; the table of shewbread, the
bread of life; the altar of incense, the fragrance of the forest; the other
trees and the cherubim, the perimeter of the Garden; and the Ark of
the Covenant, the presence of the Lord God in the midst of his creation
(figure 2).

This ecological interpretation of the structure and contents of the
Temple of Solomon has been consistently omitted from the Church’s
teaching. Yet it recurs throughout the Bible, as in the visionary temple
of Ezekiel and the New Jerusalem of St. John’s Revelation. This New
Jerusalem has always been portrayed by artists as a city full of towers
and streets and numerous houses. This is as true of Gustave Doré in
the 19th century as it is of Lufitt (figure 3), Cranach and Durer in the
16th. Even the recent Bible translation, Good News for Modern Man,
portrays it sparkling with urban glory. Yet if chapter 21 of Revelation
is read carefully there is, apart from the reference to one golden street,
no urban imagery whatsoever. The walls are crystal, as are the founda-
tions; the gates are pearl, and on the inside there is absolutely nothing
except the Tree of Life and the River of Water of Life flowing down
from the throne of God and of the Lamb. It is not a city in any urban
sense at all. It is only a city in the original meaning of the Greek word
polis, that is, a ‘representation of the cosmos’ and a ‘replica of
the universe’ as Lewis Mumford says in The City in History. Like the
Temple from which St. John derives much of his symbolism, the New
Jerusalem is a paradigm of creation not of a spiritual metropolis or holy
conurbation. It is an image of the Garden of Eden within a crystal cube
which, according to Hebrew cosmology, represented the firmament of the created universe.

The Temple was the most important spiritual centre throughout much of the history of the Bible. When we realise it was built as a model of the cosmos, a microcosm of the universal harmony, we begin to glimpse the cosmic dimensions of our Christian heritage. This is the dimension which the Church has denied us, and which we must claim for ourselves.

The Bible can help us find a spiritual justification for our quest to preserve this beautiful planet from the destruction which now threatens it. But it will only yield its rich treasures once we begin diligently to undo the theological damage of centuries. The whole of nature is within the Temple. All creation is within the New Jerusalem.
The Garden of Eden is the central image of humankind's relationship to nature throughout the Bible. We must stand our traditional notions on their heads and turn our ecclesiastical teaching upside down. Only then will we find that Revelation 9:4 which says: "They were told not to harm the grass of the earth or any green growth or any tree" is much more typical of the whole biblical attitude than "subdue the earth".

At the 2nd Wilderness Congress, Sir Laurens van der Post said, "Wilderness is the original cathedral, the original temple, the original church." I don't think he learned that from the Bible. I think he learned it from life, from his experience of the wilderness, and from wide reading in the wisdom of other cultures. But had he known, he could have found it in the Bible too, and I want to tell you that it is there. The Temple of Creation is a central message of the Bible waiting to be rediscovered and put into practice. If all Christians around the world could find that truth and live by it, we would take a big step towards solving our ecological crisis and preserving wilderness for posterity.
Human Rights within Natural Law

Carolyn Tawangyawma

My sisters and brothers, I bring greetings from the elders of the Traditional Community of Hotevilla Village, of the Sovereign Hopi Independent Nation. I wish to place before you a message of awareness about the danger to humankind’s survival on this Earth. I bring this message under the banner of the Great Spirit, the Creator of the universal plan and of the instructions and of everything given to Hopi and all people on Earth. The things that have been given to us are very precious. We are to protect and use them wisely, and to share them in order to keep harmony among all people. However, humankind has forgotten this, thus making the search for peace extremely difficult. We fear that humankind has gone too far and forgotten too much to be able now to find this peace.

Over the ages the ancient Hopi have seen and experienced many things, such as the changing from an old to a new world order because of a dreadful disaster resulting from humanity’s mindless action in
forgetting the Creator's divine laws. This has happened to three previous world orders, which have then been destroyed. It is sad that humankind seems never to learn from its past history. Now, once again, we have failed to live by the divine laws, and so gradually land and nature are becoming unbalanced. Technology is rapidly eroding our ancient culture and tradition. The wild life and forest are diminishing rapidly, while the precious water and air are becoming unhealthy to drink and breathe. The changing climate also symbolises a grave warning.

We can correct these faults by retracing our steps back to divine laws. This is a difficult step, because we are tempted on all sides by material values. The moral values we once followed have now become make-believe, but if we correct our ways we could turn the course of the future. Our prophecies foretold that the time might come when someone with a very clever mind would seek out the secret of nature and defy its laws. Much discovered from this would benefit us, but most of it would also have a dangerous side. Because nature has its own mysterious protection, humankind would eventually harvest misfortune. It has become clear now that what was prophesied were many of the products of modern science and technology such as medicine, drugs and weapons.

Meanwhile, the Hopi who turn against their original vows are unbalancing the earthly cycles that control the seasons. Because Hopiland is a spiritual centre of the Earth, this change will affect the entire Earth. According to our ancient prophecies, Hopi land will be the first to feel the effect. We will know the imbalance is coming about when our planting month is delayed by cold weather or when frost comes before our crops are mature for harvest. Both these events happened this very year, so our harvest will be less. Already wild life is beginning to disappear, while most summer insects are not returning with the seasonal cycles. We see these events as signs of some great change or new turn of events coming soon, but only the Great Spirit knows the exact time. Perhaps this is fulfilling a Hopi prophecy of a great purification of the present world order. No one knows what form this will take. It can come in peaceful ways or in the form of a terrible catastrophe. We Hopi are ready for the outcome. Whatever it may be, we all deserve what will be given.

In Hopi land, disharmony within our communities is becoming serious. Although all the villages are closely related in certain ways, such as in our ceremonial cycles and in the spiritual structure of our thoughts, our local matters are not alike. Our villages are independent from each other, and we do not interfere in other villages' affairs. Each village has its own leaders.

Recently, as a step towards removing the puppet government set up by the United States, there has been a movement to unite all the Hopi
villages. All except Hotevilla agreed to unite. In the Western European concept, political unity is a means of power. But we in Hotevilla see this as a weak and possibly dangerous approach. We have decided to maintain our purpose based on a concept of spiritual unity and on the code of laws of our village. We hope that further efforts to relieve the Hopi of the burden of colonial rule will proceed with caution regarding this sensitive issue until it is clear what the result will produce. If the original basis of society can be kept alive within the Hopi nation and elsewhere, it will become the way of life for the world as a whole, as it was in the beginning.

The way one nation treats another serves either to strengthen or to destroy the spiritual basis for peace in the world. As long as America continues to oppose the spiritual way of life we call the Hopi way, serious wars are bound to result throughout the world. Contrary to the opinion of many, the greater the military force of a nation, the greater the danger to that nation. Peace can only come to the world through an honest, non-violent relationship with the indigenous people, who are the caretakers of all life.
Sacred Lands are a Source of Balance

Joan Price

Water under the ground has much to do with rain clouds. Everything depends upon the proper balance being maintained. The water under the ground acts like a magnet attracting rain from the clouds; and the rain in the clouds also acts as a magnet raising the water table under the ground to the roots of our crops and plants. Drawing huge amounts of water from beneath Black Mesa in connection with the strip-mining will destroy the harmony, throw everything we have strived to maintain out of kilter. Should this happen, our lands will shake like the Hopi rattle; land will sink, land will dry up. Rains will be barred by unseen forces, because we Hopis have failed to protect the land given us, as we were instructed. Plants will not grow; our corn will not yield and animals will die. When the corn will not grow, we will die; not only Hopis, but all will disintegrate to nothing.

Excerpt from Statement of Traditional Hopi in 1968

The fluid nature of wind and water is an eternal and dynamic order that connects us all together. We can no longer classify our experience of wilderness by means of political boundaries that have emerged out of a technological, industrial culture. Wind and water patterns span many
Traditional craft designs often reflect the patterns within nature, as in these cloud motifs on Hopi pottery.
cultures, national boundaries and diversities of humankind. Wind and water form their own boundaries, by surrendering to the form of the earth, and are not subject to human management. These natural boundaries are like invisible walls that divide forces in a dynamic balance—a standing balance between heat and cold, density and space, and positive and negative electricity. They link us all together in natural power.

The scientific study of the fluid dynamics of wind and water patterns has added a complex mathematical dimension to our understanding of the environment, one which reveals the limits of science as an absolute way of knowing. The fundamentally unpredictable aspect of nature and climate defies scientific and technological control, yet displays global relationship and order within all life.

We are currently experiencing a global crisis, the magnitude of which has never before been encountered in the industrial mind. We have lost touch with the natural order, and need to find a knowledge to guide us back into harmony with nature and amongst ourselves. Technology has created ecological disasters, and the use of technological knowledge to resolve these disasters has in fact created a greater crisis. The natural world needs a reorientation. The Earth is alive and speaking through us. She wants us to rely on her own nourishment, provisions and organisation, and to come into harmony with her.

Ancient cultures which have lived with the Earth for thousands of years, from Buddhist to Native American, have a long and close communion with the forces of nature. Wind and water patterns have been instrumental in shaping their social conduct, giving rise to a set of natural laws governing people in accordance with the cycles of nature. Some of these laws include:

1. The absolute right to rely on nature and to develop a culture in the community that reflects the natural order.
2. The right not to divide the land, or the people from one another, by bringing in a technological, industrial value system which cannot guarantee harmony with nature for seven generations to come.
3. The right to use land and yet not simultaneously retain it (a right given by the Creator and not a political body).

These rights are fundamentally different from those of the prevailing culture, and are at the same time fundamentally harmonious with the natural order.

I believe we must transcend the mentality which expresses through the words and language of the industrial, technological world. In comparing the natural and eternal patterns of wind and water with images of the Native American cultures, I have found that the symbols of motion used amongst Native Americans have anticipated scientific
knowledge by centuries. These symbols are about balance between forces. If we let them sink into our inner mind, we may be able to tap their power for transformation. I believe we must internalise the order of nature in order to transform the problems we experience among ourselves. Wind and water are powerful forces which transform Earth energy into balance. These forces are part of our spiritual nature. In every ancient language, the word spirit means wind or breath, and a deeper understanding of these environmental forces will give us greater insight into our spiritual nature. We have much to learn from the ancient cultures which still exist! They know that the Earth is alive and that it desires peace and purification, and that this can happen only if we attune ourselves to its sacred order.
More than a Pretty Picture: Photography as a Tool in Wilderness Conservation

Theodora Litsios

"The Three Brothers", Yosemite Valley, by Carletin Watkins

The link between photography and wilderness conservation in the United States goes back over 100 years. In the 1860s and 70s, both the emerging art of landscape photography and the new idea of national parks were coming into their own. Photographs by Carletin Watkins, George Fiske and William Henry Jackson, although over a century old, continue to inspire us with the beauty of the areas they depict. Their impact was even stronger 100 years ago when photography was a new and unique medium. The fact that many of the scenes captured by these early photographers can still be seen in very much the same state today is a reflection of the success of their work. Their photographs and those of others were instrumental in communicating to the US public and its leaders the uniqueness and beauty of areas that were in danger of being destroyed in a young nation’s eagerness for expansion and profit, and they helped prompt Congress to enact laws to preserve these wilderness areas for public use and appreciation by the creation of national parks.
In the 1860s and 70s the government was promoting development of the land as quickly as possible. Acts of Congress, such as the Homesteading Act, made acquisition of land easy and inexpensive. White explorers, settlers and seekers of gold were discovering in the western United States a land of varied landscape rich in natural resources. Unlike the native Indians, to whom the land was sacred and not something one could own, many of these new settlers saw the land as a commodity to be used to the greatest economic advantage. The great abundance of natural resources fostered a careless attitude toward nature and the land. Forests were brutally logged, and land was mined and exploited in many ways with little regard to long range effects.

Artists, on the other hand, were finding a landscape through which they could express the prevailing attitude of the day toward nature. The belief in the right to own and use the land stemmed from the view of nature as a gift from a generous God to his people. It was seen as the hope for renewal and a better life. Landscape artists such as Albert Bierstadt painted scenes of glowing beauty and drama in the European tradition. These beautiful paintings, very popular at the time, were not always accurate portrayals of the landscape. Bierstadt was known to make mountains steeper and peaks sharper, to resemble more closely the Bernese Alps that he had loved and painted as a young art student in Europe.

But it was through photographs that the average American became acquainted with the land west of the Mississippi. The development of the collodion or wet plate photographic process in the early 1850s not only allowed photographers to work out in the field away from the studio, but also resulted in unlimited numbers of prints being able to be produced from the glass negatives. By the late 1850s, photographers were taking this new process to the far reaches of the wilderness in the west.

However, the new collodion process was still a difficult and complex one, requiring great dexterity. The photographer had to clean a glass plate and coat it with the collodion, a viscous substance made lightsensitive by immersion in a bath of silver nitrate. The plate then had to be exposed while still wet, as the coating’s sensitivity to light diminished as it dried. After exposure the plate had to be developed, dried and lacquered. The immediacy of the process required that a portable darkroom be on hand, and pack mules carried the glass plates, chemicals and other supplies for these early landscape photographers.

It was after seeing some of the first photographs to be taken of Yosemite valley that a young San Francisco photographer, Carletin Watkins, ventured to this remote area and began his love affair with the valley through photographs. He discovered a wilderness area of magnificent and awe-inspiring beauty. Seeking to reflect these aspects of the landscape, he built a camera that produced images on glass plates.
that measured 18" by 22", much larger than the plates used by most photographers at that time.

By 1863 both Yosemite and Watkins' photographs were becoming increasingly well known. Since its first settlement in the early 1850s, Yosemite's beauty had been extolled by early survey parties, painters such as Bierstadt and photographers such as Watkins, Edward Muybridge and Charles Weed, and it was attracting more and more visitors. But with the popularity came an increased concern that the area could too easily be exploited and destroyed. The first inkling of this came as early as 1853 when two promoters had a 315 ft sequoia tree cut down from a grove near Yosemite, stripped the bark to a height of 116 ft, and had it shipped East and put back together to show as a curiosity. Many people thought it was a fake, and others were enraged that such a grand product of nature should be destroyed to be shown as a public curiosity.

Concern over Yosemite's fate was beginning to grow, and in 1863 a group of Californians led by Frederic Law Olmstead, a leading landscape architect, urged the preservation of Yosemite and the great sequoia trees. One leader of this group, Israel Raymond, wrote Senator Conness of California urging protection of this area, and sent along some of Watkins' photographs to increase the power of his message.

The impact was significant enough to motivate Senator Conness to introduce a bill into Congress in March 1864 that made Yosemite Valley and the nearby grove of sequoia trees a state park of California. In June that year, at the height of the civil war, President Lincoln signed a bill that stipulated that the State of California accept the grant upon the express condition that 'the premises shall be held for public use, resort, recreation and shall be inalienable for all time.'

With the close of the Civil War in 1865, the US focused its energies on exploring its western territories, with both private and government sponsored surveys studying various areas of the west. One private survey, a group of Wyoming citizens with a military escort led by General Henry Washburn, explored a particular area of the Wyoming Territory known as Yellowstone. Their curiosity had been piqued by stories of amazing sights such as bubbling mud pots, geysers, huge canyons and waterfalls. Their survey proved these stories to be true, and a member of the party, Cornelius Hedges, along with David Folsom, a previous visitor to the area, conceived the idea of preserving the area for public benefit. Joined by another survey member, Nathaniel P. Longford, they wrote articles and gave public lectures describing the wonders of Yellowstone and calling for its preservation. One of the people who attended a lecture was Dr. Ferdinand Hayden, director of the US Geographical Surveys of the Territories. He became interested in Yellowstone and was granted $40,000 by Congress to conduct an official survey of the area.
Realising that the public was sceptical of the existence of such a fantastic landscape, Hayden took along an artist, Thomas Moran, and a photographer, William Henry Jackson, to document their discoveries. Jackson, who took along 400 glass plates, chemicals and other necessary supplies, became the first person to photograph the wonders of this remote wilderness area, sometimes producing 20 photographs a day—quite a feat considering each took 30-40 minutes to create.

The information and images with which they returned in the winter of 1871 were powerful indeed. Armed with this new evidence, Hayden worked with those who were trying to convince Congress to pass a bill preserving Yellowstone. He distributed Jackson’s photographs among the senators, who were immensely impressed by them. Major Chittenden wrote: “The photographs were of immense value. Descriptions might exaggerate, but the camera told the truth; and in this case the truth was more remarkable than exaggeration... They...convinced everyone...that such wonders existed, that they should be carefully preserved for the public forever.” Congress agreed, and in December 1871 a bill was introduced to preserve almost two million acres of the Wyoming Territory. The Yellowstone Act was passed in February 1872, and the first National Park was created.

This established a precedent, and in 1916, when the National Parks Act was created by Congress, 37 national parks and monuments existed. This Act established a policy toward the management and preser-
vation of these scattered and independent parks with the creation of the National Park Service.

It was also in 1916 that a young photographer was taking his first images of Yosemite National Park while on vacation. In the next few decades the name of Ansel Adams was to become synonymous with great landscape photography and a concern for wilderness preservation. Adams was studying to become a concert pianist, and pursued photography as a hobby. Yosemite was his favourite subject, and his appreciation of nature grew along with his technical ability. Soon he was giving all his creative energy to photography, and his growing concern for wilderness conservation led him to become a member of the Sierra Club. In 1936 the Sierra Club sent him to Washington DC to promote their plan for the creation of a national park in the Kings River Canyon and the high country of the Sierra Nevadas that surrounded it. They knew Adams' photographs of the area would be a powerful means of communication. Adams carried his portfolio through Washington showing it to senators and cabinet officials and addressing a conference on national and state parks. Although there were no immediate results from this trip, on his return Adams was offered a great commission—Walter Starr, a longtime member of the Sierra Club, offered to subsidise a book on the Sierra Nevada mountains as a memorial to his son, Walter Jr., who had died in the Sierras while creating maps.

Adams worked hard on what he loved best, creating images that expressed the grandeur and beauty of nature. The book, *The Sierra Nevada: The John Muir Trail*, was published in 1938, a creation of the highest quality. This impressive volume was distributed to many Washington officials and did much to help establish the Kings Canyon National Park, which was finally created in 1940. In a letter to Adams, F.A. Silcox expressed an attitude that was probably shared by other Washington politicians: "Although I never visited the High Sierra country, these pictures give me a feeling of the stupendous beauty of this country such as I didn't think possible while sitting in a remote office. These beautiful photographs certainly impress on one the value of the objectives for which you and other members of the Sierra Club have been fighting for many years, the preservation of the natural environment of the High Sierra."

Not all battles for wilderness conservation are successful. Sometimes the only remaining evidence of the lost beauty of an area are the photographs that recorded its grandeur before its destruction. Such is the case with Hetch Hetchy Valley, sometimes called Little Yosemite Valley. Although part of Yosemite National Park, this valley was doomed in 1913 when an act of Congress gave approval for a dam to be built to create a reservoir to supply San Francisco with water. The conservationist John Muir and others fought a long and hard battle to
stop the needless destruction of this valley, but in 1923 the gates of the O'Shaughnassy Dam were closed and the Hetch Hetchy Valley slowly flooded.

Many people grieved this loss and hoped it would serve as an example of the needless destruction of a wilderness area. But such lessons are too quickly forgotten and in 1963, only 40 years later, history repeated itself when Glen Canyon, a magnificently carved canyon of the Colorado River, was also buried under water by the building of a dam which many believed to be unnecessary.

We are fortunate to have Eliot Porter's photographic record of Glen Canyon as a poignant testimony to its beauty. In 1961 and 1962 Porter made several trips to this canyon, which was already destined to be flooded. His photographs were published in a book entitled Glen Canyon: The Place No One Knew. The tragedy of this loss is clear when one sees these photographs for the first time. If, like myself, you view them before reading the text, the heartbreak is greater when you discover that this spot you have just fallen in love with no longer exists.

As both the world and its wilderness areas seem to shrink, activities such as logging, mining, blasting for oil exploration and other commercial exploitation around many of the national parks have left them greatly endangered. In the last ten years, the buffer zone of a few miles around the parks has diminished rapidly. Aerial photographs show how logging up to the very border of the parks has become common practice, and make us painfully aware of other threats—such as a proposed coal mine eight miles north of Glacier National Park, geothermal development near Yellowstone that threatens Old Faithful Geyser, and a proposed high level nuclear waste dump less than two miles from Canyonland National Park.

From the first photographs ever taken in wilderness areas, to the more recent ones showing threats to our national parks, photography continues to be a powerful tool in the battle for wilderness conservation. As a means of communication it has repeatedly brought powerful images of wilderness areas to people who have never seen or experienced nature in this way. Consequently more people have been able to preserve these remote and often threatened areas. As the battle for wilderness preservation continues, so will the important role that photography plays in working toward continued success.
As a psychologist trained in a discipline called Psychosynthesis, I conduct internationally a wide variety of seminars and workshops, personal growth and professional development programmes. One of the many programmes I have created is called the Wilderness Vision Quest. Since 1976 I have led groups of people on this camping and backpacking experience. Through an intimate encounter with nature, I help interested people grow in their appreciation of the natural world and, through the careful use of tools for self-discovery, explore and develop some of the valuable human resources which lie dormant in all of us. More than 400 people have taken part in this programme, gaining a sense of recreation and renewal by living lightly on the land and attuning to its wonders. The comments and reflections which follow are informed by, and flow from this work.
There are a large number of organisations in the United States today that guide people on experiences of wild country. Outward Bound, the National Outdoor Leadership School and Wilderness Odyssey stress physical challenge and high adventure as a means by which to conquer and let go of negative self-concepts, break through psychological barriers and enhance self-esteem. The American Rivers Conservation Council offers canoe and raft trips down splendid and pristine waterways as part of their educational and conservation efforts. The American Forestry Association offers horseback trips and trail rides in the wilderness of our western states. The Smithsonian Institution offers group excursions to Alaska, among many other places. The National Audubon Society and the National Wildlife Federation offer programmes on bird watching, plant identification, and the study, observation and protection of endangered species.

But what is wilderness and why does it so capture our imagination? The term ‘wilderness’ evokes different images for different people, but I believe the urge to officially designate areas as wilderness and to protect these areas from mining, timbering, grazing and other uses, is an outer expression of a universal inner need: the need to hold and honour, within us and out in the world, some small part of life as sacred. Thoreau once said, “In wilderness is the preservation of the world.”

Wilderness provides us with the opportunity to witness ecosystems as they evolve outside human influence, to witness a primal state of cooperation, balance, harmony and wholeness. Each part of the land contributes indispensably to the whole, from the smallest microorganism to the giant redwood trees in the oneness that truly is life. The struggles of life, death and rebirth can be found on every square foot of natural terrain, and all the lessons of transformation as well: caterpillars changing into winged butterflies; verdant life bursting forth from the floor of charred and burnt-out forests; the ruffled grouse charging us with outspread wings to protect her young and draw us away from them; trees still reaching up toward the light even when struck by lightning, upturned by wind and water or smashed by other falling trees.

It is time to speak openly and with a clear voice about the spiritual dimensions of our contact with the natural world. It is time to focus deliberately on and work consciously toward the constructive discovery, exploration, healing, enrichment and growth of the human spirit. Arthur Carhart, in Timber in Your Life, said, “Perhaps the rebuilding of the body and spirit is the greatest service derivable from our forests, for of what worth are material things if we lose the character and the quality of the people who are the soul of America?”

There is an almost exponential growth in the number of people who are turning explicitly to the environment for a deeper sense of
naturalness, simplicity and solitude, and a tangible spirituality grounded in the mysteries of nature. We all know we are moved by the beauty and wonder of nature, and yet few of us can really articulate how or why. We need to develop a new language of the spirit, be conscious of and able to speak about the values we derive from our wilderness adventures if we are to secure and then preserve the last few remaining truly wild regions on the planet.

Few of us know how gently but with intention to approach the mysteries and wonder of nature; to truly find simplicity in the wilds; to set the stage for an experience of the eternal, the infinite, the ineffable. Almost without exception, those organisations that do lead people into wild country simply wait for or hope that special and memorable experiences will occur. These are the moments we most remember. But we can consciously and deliberately move toward these dimensions through the careful use of specific methods and techniques for expanding and heightening our awareness. Through a combination of physical activity, light diet, exposure to the cycles and rhythms of nature, and carefully selected individual and group processes, we can intensify our experiences both of the wilderness and of our inner lives. We can learn to create the physical, emotional and psychological readiness to hear the voice of nature, be touched by wonder, develop our imagination and intuition, and have the energies of inspiration move powerfully through us. We can move closer to a primal sense of the unity of all creation and, for our effort, be regenerated and renewed at the deepest levels.

This is a healthy and holy movement: a response to the inner urge toward excellence and well-being that can become so eclipsed in urban living. In fact, we need to experience and deeply explore the natural world on our quest for wholeness. Jose Arguelles said, “If nature is a harmony and man a part of nature, then man himself must be innately harmonic. The laws governing his mind and body reflect and partake of the functioning of greater nature.” We live in bodies that are exquisitely wired by evolution to perceive and respond to subtle shifts in colour, temperature, sound and movement. We are natural creatures living, to a great degree, in unnatural and unmoving environments, disconnected from the weaving, pulsing, throbbing web of life. We have to do something fairly radical to kick-start ourselves into full operation once again, but we must do it in a way that also honours the inherent wholeness of our body, feelings, mind and spirit.

On the Wilderness Vision Quest I teach participants a wide array of methods and techniques for deepening their appreciation of the natural world and for facilitating the process of self-discovery. Through my work in Psychosynthesis I have developed an eleven step process which I call ‘Creative Explorations of Inner Space’. This process is effective in a variety of settings, and for a variety of purposes. Allow me to outline
how I employ it on the vision quest. You can even use it on your own after reading it here if you are interested in giving it a try. However, such inner journeys are often much easier to experience under competent supervision.

CREATIVE EXPLORATIONS OF INNER SPACE (CEIS)

Step 1: Preparation. On the Wilderness Vision Quest, I spend a couple of days preparing the participants for the CEIS. Each morning begins with an hour of gentle stretching and body movement in the form of Hatha Yoga. We work in our journals several times a day, recording our experiences and documenting the aspects of the land which excite, stimulate or inspire us. We take only four pounds of food to eat for a period of a week, to lighten up in our bodies and move closer to our true emotions. Preparation is a critical and important step to take when we decide to have contact with deeper aspects of our inner lives.

Step 2: Deep Relaxation. When it comes time for the CEIS, I begin with about five minutes of deep relaxation. I direct the participants to simply close their eyes, breathe deeply a few times, and let go of their stress and/or tension. This helps them detach from the external world and tune into their inner lives.

Step 3: Reflective Meditation. We have already made a list of the various aspects of nature which have been fascinating to us. In this step we choose the one fascination which means the most to us. We write about this fascination in great detail: what it is; in what niche it finds its expression; its size, shape, colour; what it means to us and how we feel about it. We take about 15 minutes to reflect consciously on these dimensions.

Step 4: Receptive Meditation. Now we sit with eyes closed, quietly and in a receptive mode, allowing deeper thoughts and feelings to surface and enter our conscious minds. The more subtle aspects of our fascination rise into our field of awareness and, when they do, we record them in our journals. We take about 10 minutes for this.

Step 5: Visualisation. We close our eyes and breathe deeply a few times. Then we allow an image or mental picture to form in our mind’s eye of that which is our fascination. In other words, we call up this aspect of the natural world in imagination, thus engaging this important psychological function. The images that come to mind are often quite startling. Seldom are they an exact representation of the outer form. Since the imagination is the holographic function of the psyche, it takes a great many variables into account all at once, and the image which appears is a composite picture of what we know, what we see, what we feel and its meaning to us. It takes only a few moments for this image to appear in visualisation.
Step 6: Symbolic Drawing. Now we open our eyes, take out our journals and draw a large circle on a blank page. This circle becomes a frame in or around which we make a drawing of our inner image. We use oil pastels, coloured felt-tip pens, magic markers and other material with which to make the drawing, and we take as much time as we need to draw it. Some people are finished in ten minutes; others take half an hour. It is not uncommon for me to spend up to three hours making a symbolic drawing, but then I have been at this a very long time and derive tremendous satisfaction from the process. I tell participants not to be concerned with the artistic value of the drawing. Intellectual judgements or perfectionistic criticisms will prevent the symbolic drawing from occurring in a fluid and authentic manner.

Step 7: Cognitive Analysis. Now we analyse our drawings, writing in detail what we see and how we feel about the artistic expression. What are the differences between the inner image and the outer symbol? What do the colours and shapes stand for? Now that the image has been externalised, what further thoughts or reflections come to mind? What is the meaning of the drawing? The answers to all these questions are recorded in our journals.

Step 8: Symbolic Dialogue. We close our eyes once again, take a few deep breaths and bring back the image into our mind's eye. When we can visualise the image clearly, we ask this question directly to the image: "What do you have to teach me at this moment in my life?" Focusing on the inner image and asking this question helps us access very deep levels of consciousness. Nature speaks to us through the voice of our intuition in a language of poetry and wisdom. As these messages enter our conscious minds, we write them down beneath the drawing in quotation marks. This symbolic dialogue can be repeated once or twice again in the course of about 15 minutes, to extract the maximum cognitive learning.

Step 9: Symbolic Identification. Now we stand up with our eyes closed, breathe deeply a few times, and recall the inner image. Visualising the image clearly once again, now we let ourselves go imaginatively. We let our awareness slip into the living reality of the fascination with which we are working. We become the fascination in our bodies, letting ourselves dance, move, gesture, assume various body postures appropriate to this unique expression of the natural world. We also let whatever sounds, noises, or spontaneous music that seems appropriate flow through us. The longer we allow ourselves to experience this symbolic identification, the deeper we move in rapport with the creative intelligence of the universe. Our own blocked channels of energy open up, new circuits establish themselves (if but for a little while), and we explore some of the latent but quite potent human potential within us. When we are finished, we return to our journals and record our experiences.
Step 10: **Grounding.** As we begin to wind down the CEIS, we reflect on everything that has happened. We wonder how we can apply the insights, energies and wisdom we have received to our everyday lives. We choose one real aspect of our ordinary lives that might benefit from the application of this material, and write about it in detail.

Step 11: **Closure.** The last step in the CEIS process helps us return to ordinary levels of awareness. We take the time to share our experience with another person or with a small group of people. We speak of our experiences in depth, and we listen to the experiences of others as we all try to bridge the gap between ourselves and each other, and between ourselves and nature. A very powerful bonding occurs through this process, with others and with nature. Our fascinations on the land continue to be important teachers for us after this. We learn to pay special and close attention to what fascinates us on the land, realising that any part of nature can become the gateway to profound states of awareness, insight and energy.

As we slow down to observe and reflect on these facets of nature, we begin to internalise their messages. Just as we need mirrors with which to see our own faces, we also need the mirror of these natural processes in which to catch the reflection of our inner selves. We are drawn to or fascinated by various aspects of nature because they resonate with essential aspects of our inner lives. Within each of us are pains to be healed, experiences to integrate, talents, abilities and potentials to be actualised.

As we learn how to observe and then participate this fully with nature, we leave behind those patterns and beliefs that keep us feeling so separate and alone. We discover the unity of life and the importance of our special part in it. Empowered by this perspective and these experiences, we can return to our daily lives changed in a positive way, open, responsive and alive, and more able to align our actions in the world with our deepest values.
The Use of Wilderness and Environmental Studies across the School Curriculum

Don Richards

Fred Polak, author of *The Image of the Future*, presents an interesting and frightening parallel which humankind, and especially those involved in education of any form, should take cognisance of:

Imagine an Indian tribe which for centuries has sailed its dugouts on the river at its doorstep. During all this time the economy and culture of the tribe have depended upon fishing, preparing and cooking the products of the river, building boats and appropriate tools. So long as the rate of technological change in such a community stays slow, so long as no wars, invasions, epidemics or other natural disasters upset the even rhythm of life, it is simple for the tribe to formulate a workable image of its own future, since tomorrow merely repeats yesterday.

It is from this image that education flows. School may not even exist in the tribe; yet there is a curriculum—a cluster of skills, values and rituals to be learnt. Boys are taught to scrape bark and hollow trees, just as their ancestors did before them. The teacher in such a system knows what he is doing, secure in the knowledge that tradition—the past—will work in the future.

What happens to such a tribe, however, when it pursues its traditional methods unaware that six hundred kilometres upstream men are constructing a gigantic dam that will dry up their branch of the river? Suddenly the tribe’s image of the future, the set of assumptions on which its members base their
present behaviour, becomes dangerously misleading. Tomorrow will not replicate today. The tribal investment in preparing its children to live in a riverine culture becomes a pointless and potentially tragic waste. A false image of the future destroys the relevance of the education effort.

This is our situation today—only it is we, ironically, not some distant strangers, who are building the dam that will annihilate the culture of the present. Never before has any culture subjected itself to so intense and prolonged a bombardment of technological, social and info-psychological change. This change is accelerating and we witness everywhere in the high-technology societies evidence that the old industrial era structures can no longer carry out their functions.

Yet our political leaders for the most part propagate (and believe) the myth that industrial society is destined to perpetuate itself indefinitely. Like the elders of the tribe living on the river bank, they blindly assume that the main features of the present social system will extend indefinitely into the future. And so most schools, colleges and universities base their teaching on the notion that tomorrow’s world will be basically familiar.

The Global Report to the President of the USA in 1980 stated:

If present trends continue, the world in 2000 AD will be more crowded, more polluted, less stable ecologically, and more vulnerable to disruption than the world we live in now. Serious stresses involving population, resources and environment are clearly visible ahead. Despite greater material output, the world’s people will be poorer in many ways than they are today.

The Bali Declaration of October 1982, linking conservation with sustainable development and the rational use of the world’s natural resources, states:

Earth is the only place in the Universe known to sustain life, yet, as species are lost and ecosystems degraded, its capacity to do so is rapidly reduced, because of rising populations, excessive consumption and misuse of natural resources, pollution, careless development and failure to establish an appropriate economic order among people and among states. The benefits of nature and living resources that will be enjoyed by future generations will be determined by the decisions of today. Ours may be the last generation able to choose large natural areas to protect.

How are we preparing our children? If our future citizens are to value wilderness, then they must not only know what it is, but must also realise the intricate part it plays in the scheme of things. I believe children should be introduced to the concept of wilderness and exposed to the reality of it as soon as possible—for otherwise we shall continue to develop future citizens on an assembly line of education like a string of sausages, environmentally illiterate and insensitive to the concept of wilderness and to the necessity for its conservation and preservation, not only for its own sake but for the survival of humankind.

Piaget, the noted child psychologist and researcher, maintains that from about the age of eleven, children begin to be able to evaluate the
world around them without relying on information gathered from concrete objects. According to Piaget, they are now ready to begin learning abstractly, gradually developing the capacity to reason through the use of hypotheses. When given information, they can start making logical deductions without first turning to concrete examples.

Hence it is reasonable to presume that eleven upwards would be the suitable age to introduce children to 'wilderness' and its role in humanity's survival.

Human beings are part of the environment, both depending totally on it and also affecting it. By understanding our use and misuse of the natural and human-created communities in which we live, we can better deal with problems that face us.

Environmental studies is not a subject, but a method of education based on the idea that the world around the pupil is his or her natural classroom. Environmental learning can be as simple as looking around at your own surroundings to see what they include and what is pleasant and unpleasant about them. The ultimate objective of an environmental programme is to enable us to think reasonably and understandably about our environment—to see patterns of cause and effect which make sense. Environmental learning is a practical and common sense way of schooling. Instead of studying make-believe situations and solving make-believe problems, the student is faced with real-life ones. No-one can be taught environmental awareness; it must be experienced.

In preparing children to understand the need for wilderness areas, we can use wilderness itself as an outside classroom. Here children can both identify problems and identify themselves with these problems, and try to solve them as they are faced with them. They can research and learn how to process their research. They can learn to think for themselves as they become aware of their surroundings, and so see that they must become responsible citizens of planet Earth by contributing to making this world a better place to live in.

A BLUEPRINT: THE TREVERTON PROGRAMME

An exciting educational venture has begun at Treverton Preparatory School in Mooi River, Natal, South Africa. Environmental studies have been introduced across the whole curriculum at the Standard Five (11-12 year old) level. Tuition and practical work in all the normal school subjects—including science, geography, history, mathematics, English, Afrikaans, art and religious instruction—take place in the outdoors, and then later in the classroom, where pupils consolidate what they have learnt.

The central theme of the study is the Mooi River from its source in the Drakensberg Mountains to its confluence with the Tugela River. The many varying ecological habitats and systems provide ideal
Howick Falls forms a spectacular and environmentally interesting study for emerging naturalists.
subjects for study and comparison by multi-racial groups of boys and girls in the Standard Five classes. The study area embraces three major wilderness areas in Natal and Zululand, and these are not only used to promote an understanding of the normal school subjects in the curriculum but also serve to make the pupils vitally aware of the need for wilderness areas—which results in environmentally literate citizens.

Members of a class are divided into groups which camp out at different study points along the river and in the wilderness areas, where they do research. They then complete a two-week consolidation period back at school, when they prepare projects and teach-backs on the results of their research. In this way the whole class benefits from each group. Prescribed text books are interwoven into these environmental studies, and the normal tuition throughout the year is all related to what students have learned in the field.

This environmental approach to education is a scholastic one which enables students to study and learn through real-life situations, backed up by normal teaching practices. As they get to grips with the environment and especially with wilderness areas, they discover their place in it and their responsibility to it. They also discover they are an important link in God's creation.

The study areas covered are: 1) the school and its environment; 2) the Giants Castle Game Reserve—a study of the Bushmen; 3) Mooi River town—an urban study; 4) Fernwood—a study of the source of the Mooi River and its environment; 5) Zululand—a study of the culture and history of the Zulu people plus bushveld ecology and estuarine ecology; 6) Rosetta—a study of the upper-middle Mooi River and its environs; 7) Durban—a study of the early history of Natal, early settlers, plus study of fish, reptiles, docks; 8) Pietermaritzburg, the capital of Natal; 9) the Mooi River falls area; and 10) comparison of all study areas and conclusions.

I will give an example of just one of the study areas here—the Giants Castle Game Reserve. Here the aim is to study the history and culture of the Bushmen in relation to the ecology of the Giants Castle area; to learn about geographical concepts such as plateaus, peaks, valleys, watersheds, sponges, etc; to learn about the geology of the area and link this with its plant life; to show pupils that wildlife areas have to be wisely managed and conserved in all respects; and to show pupils that areas such as Giants Castle are needed by people to reflect on God's wonderful creation.

Preparation for study in this area involves drawing up an outline of work schedule. A preliminary reconnaissance of the area is made, pre-study, on-study and post-study worksheets are worked out, accommodation, food and transport arranged, and necessary materials and reference books collected.

To introduce the study, a tape on the history and culture of the
Bushmen in the Giants Castle area is borrowed from the Natal Parks Board and played to the class. Pre-study worksheets are given out to the children. We discuss the basic geology of the area, as well as the basic vegetation in relation to the geology. On arrival at the rest camp at Giants Castle, or when necessary during the study, on-site worksheets and reference material are handed out.

The pupils are divided into groups, and each allocated a different assignment. Group One is assigned the history of the Giants Castle Game Reserve; Group Two, the wildlife of the reserve; Group Three, a study of the Bushmen; Group Four, the geology and ecology of the Drakensberg, as well as its importance as a water conservation area; and Group Five, the management of the Reserve.

In addition to working on their particular assignments, all groups also do field work on the whole area, studying plant and river ecology and the Reserve. A project in the Afrikaans language is also set.

Once back at school, each group writes up a project on their assignment and gives a teach-back to the rest of the class.

Group One (the history of the Reserve) cover the early people—the Bushmen; the Langabalele Rebellion; and the formation of the Reserve, including the pioneers of the Reserve. Audio-visual displays accompany the teach-back.

Group Two (wildlife of the Reserve) produce charts, drawings and sound recordings, and graph game counts. Food chain and habitat displays accompany the teach-back.

Group Three (a study of the Bushmen) give a teach-back on the history and culture of the Bushmen, accompanied by visual and audio displays.

Group Four (the geology, ecology and importance of the Drakensberg as a water conservation area) produce models and overhead transparencies of a cross-section of the geology of the area, a cross-section of the vegetation belts, and a map and model of the Reserve.

Group Five (management of the Reserve) cover management techniques employed by the Natal Parks Board, using models, overhead transparencies and slides of conservation modules and methods.

In evaluating the students, the work done is recorded and progress in writing, language, maths and other skills is noted, as are special talents. Note is also taken of pupils involved in a narrow band on the project, so they can be involved in other areas. The projects are marked. All material used in the projects and teach-backs is collected and stored for exhibitions (such as Parents' Days, conferences and symposiums) or for reference.

During their year of total involvement in the environment, the children emerge as young people whose attitudes and values have changed. They have not only received a true education, but also have
become caring people, caring for others, for their environment and for the wilderness they have grown to love.

The environmental education programme has now extended into the rest of the school. In the Standard Six year, each child completes a mini-thesis and spends two periods of five days in the year doing research with experts in whichever field they have chosen. In the High School, a very active outdoor pursuits programme has been instituted.

We have to look to the future, and we believe that this form of education immerses the student mentally, physically and spiritually in their surroundings, enabling them to gain a deep understanding of our dependence on our environment and our responsibility to it as the custodians of God’s creation. There is hope that our wilderness areas will be in good and capable hands.
The Value of Wilderness for Young People of Today and Tomorrow

Karen Blair

Wilderness areas are one of the greatest assets we have in which to train young people to understand themselves and their world.

In considering the theme of this talk, I obviously do not have the background of a person with many years' experience of wilderness. Consequently, I am simply going to speak about my work for the Duke of Edinburgh's Award, and to share some thoughts on how it has affected me as a young person and why I feel wilderness areas should be maintained for the young people of tomorrow's society.

The Duke of Edinburgh Award Scheme is an international programme which became known as the Duke of Edinburgh's Award in 1956. At present it operates under a variety of titles throughout the world. It is an organisation within which young people between the ages of 14 and 25 can take part in a wide variety of activities which give them enjoyment, excitement and satisfaction. Its founder, Prince Philip, Duke of Edinburgh, describes it as a 'do-it-yourself kit for education in the art of civilised living'. To gain the award, according to Commander Peyton Jones, International Secretary of the Scheme, participants require qualities of 'self-discipline, perseverance, enterprise and effort'.
Wilderness can be defined in different ways, but the definition I like is that found in the 1964 American Wilderness Act: "An area where the earth and its community of life are untrammeled by man, where man himself is a visitor who does not remain." In the light of this definition, only areas such as the polar regions, deserts in Africa, rain forests in Australia and jungle areas in South America can be classified as wilderness. Due to the proximity of human beings, there are no true areas of wilderness in Britain. The Duke of Edinburgh Award Scheme expeditions therefore take place in wild country, in areas such as the Highlands and western isles of Scotland, the Lake District, the Peak District, mid-Wales and Snowdonia.

Through my involvement with the Duke of Edinburgh Award Scheme and with Outward Bound courses I have attended from college, I have had fairly extensive experience of Britain’s wild country. I was also fortunate enough to be brought up in Peru, where I was to some degree able to experience the wilderness areas there. On several aeroplane flights I have viewed the vast expanse of dense jungle areas and the forbidding, cold, snow-peaked tips of the Andes which stretch for miles without any sign of life. In Peru I made a study of the Jagua Indian tribe, one of the few remaining primitive tribes who inhabit an area near Ampiyaw river, about 146 miles down the Amazon river from Iquitos.

One of the reasons wilderness areas are important for young people is because of their aesthetic value. In wilderness areas, one leaves behind all aspects of civilisation and the considerable amount of human-created ugliness, and is instead surrounded by naturally created beauty. As the senses become attuned to the surroundings, one learns to observe the vegetation, trees and plant-life, or perhaps the barren and rugged beauty of rocks, mountain peaks, streams and waterfalls, marshes and moorland. Areas vary in appearance with the seasons and the time of day. The beauty remains, irrespective of weather conditions which affect the landscape in a variety of ways.

These areas also provide us with an experience of peacefulness and tranquillity away from the hustle and bustle and pressures of modern living. By communing with, responding to and delighting in nature’s different moods, one is able to relax and enjoy life at a slower pace. Our senses of sight and sound become quickened and more acute, helping us to develop an appreciation of the environment. For example, the nocturnal sounds I encountered in the jungle were frightening but intriguing. Worries too can be suppressed, because nature provides us with something else to think about.

Nature can also be comforting and friendly. The poet A.E. Housman, for example, who introduced nature into many of his poems, felt he was able to communicate with nature, and regarded it as a companion which could relieve him of his suffering. In his poem, 'In
my own shire, if I was sad', he depicts nature as a friend which can comfort him when in trouble, something humankind is unable to do because of its own troubles.

Another reason wilderness areas are important for young people is because they can provide adventure, which plays an important part in character building. Facilities for Outward Bound courses in Peru are limited, although the natural environment is ideal. However, there is scope for organisations such as scouts, brownies, guides, rangers and the foreign-run Scripture Union which holds camps on the coast and in the jungle for both privileged and underprivileged youngsters. It was through these organisations that I first savoured and developed a desire to further my experience in this field. Peru has a tremendous amount to offer, particularly where mountaineering is concerned, and in recent years the Cordillera Blanca has become a popular goal for expeditions from all the major climbing countries.

My final two years of schooling took place in Britain, where my earlier experiences in Peru encouraged me to take part both in the Duke of Edinburgh's Gold Award Scheme and in the Physical Education course I am now following. Both of these have helped build my enthusiasm for the wonders that nature provides, and convinced me of the need to preserve them for future generations.

Some of the activities in which I have participated are rock-climbing, abseiling, mountaineering, canoeing and camping, all of which involve elements of uncertainty. In rock-climbing, for example, tension and nerve are involved as one faces anxiety about whether the rock can be negotiated safely, before deciding to commit oneself. Self-confidence and good judgement are strengthened. As confidence grows, commitment follows and the challenge is faced. The element of risk is only when the feat is completed, and the reward is great physical and spiritual satisfaction.

The rewards from any adventure situation are most important, and vary according to the activity being undertaken. For example, in rock-climbing I enjoy both the breath-taking scenery viewed from the heights and the great feeling of achievement, satisfaction and elation at reaching the crest I have aimed for. In mountaineering, the essence of achievement lies in relief at arriving at the destination after combating the weather and terrain with a map and compass. And in canoeing, there is the magnificent sensation of riding the powerful current and the thrill of moving with the force of water as well as the feeling of trying to control and dominate it.

By taking part in such activities, people learn to appreciate the environment and to cope with unexpected situations. They also gain much valued human qualities such as concentration (for to relax your vigilance could have drastic consequences), determination and persistence. I remember hiking and camping in a force ten gale on a wet
Physical strength and endurance, such as can be gained from rock-climbing and canoeing, are among the important qualities which can be acquired through wilderness experience.
and stormy night. Thoughts of giving up crossed my mind, but the idea of allowing the weather and terrain to defeat me made me all the more determined to continue. Initiative and self-reliance are also developed, for if you do not check the weather and gather sufficient provisions such as firewood and food, then it is you who suffer. Faith and trust grow as you learn to care for, encourage and rely on other individuals as well as on material things such as a rope in rock-climbing. Cooperation is another quality fostered by outdoor activities. The ability to recognise, value and use the differing talents among members of a group, as well as to deal with others and use their ideas and suggestions, is an important step towards learning to live effectively. You also learn that fears and difficulties can be overcome, and that you can achieve things if you really do try. I have become aware that there is no such word as ‘can’t’, because ‘where there’s a will there’s a way’!

At the same time, taking part in such activities and being subjected to forces of nature like the weather and the power of water makes one humble. This is particularly important today when modern technology has become so powerful that it can lead some people to a sense of omnipotence. Being in a wild environment produces a respect for and understanding of the world that exists beyond human control.

Outdoor pursuits can heighten awareness and allow young people to test and discover their powers and potentialities, to learn true values, and to experience new things away from the crowded influences of city life, radio, television and above all from the great temptation to watch and receive instead of to do. Taking part in activities is vital, for as Wordsworth once said, "It is in moments of feeling and excitement that one’s deepest lessons are learned." Every teacher knows that it is only by capturing the interest and engaging the emotions of young people that they can effectively be taught.

Wild country areas can also be a challenge and stimulus for the older generation. I was inspired recently by a documentary film, Miles to Go, which showed women of all ages experiencing high risk activities in the wilderness areas of America and facing challenges different from those encountered in everyday life.

I have personally gained a great deal from being in wilderness areas and taking part in high risk activities there. I hope to continue to gain experience and to encourage others to do so also. It is vital that we strive to preserve those areas in which rivers, seas and mountains meet to provide a natural challenge and training ground where the young people of tomorrow can be helped to gain the human qualities valued in society and to experience wilderness. There is no point encouraging young people to explore wilderness areas if there are no wild places left for them to find.
Wilderness: A Way of Truth

Laurens van der Post

When we contemplate the future of wilderness today, we see it as a place without human beings, where people go only as visitors. But we forget that there was once such a person as the ‘wilderness man’. The original wilderness contained not only plants and trees and animals, but also people.

When we talk about primitive people in the world today, we are not really talking about them in the sense of first people. Most of our ideas of primitive people are based on what we have observed of great indigenous cultures which are already well advanced on the way to civilisation. The American Indians, for instance, were far more in communion and communication with their instincts than we are, but they were by no means primitive. They were already very sophisticated people. People like the Navajo and Hopi had their own forms of civilisation. The Navajo were great sheep people, while the Hopi were agricultural people who went in for husbandry. They had already crossed the great divide and tamed a part of nature for their own uses. The great black societies of Africa are also people of very vast and sophisticated forms of human organisation.

But Africa did produce a first person. And this first person has haunted my life from the time I was born, because I had a nurse who was one of the last survivors in my part of Africa of the first people. I owe her a tremendous amount, because through her the private person in me, the child in me, took wing.
In later life I had the privilege for about three and a half years to be in constant contact with these first people of Africa, the Bushmen. When we contemplate them I think we realise the horror of what we have done—that in destroying wilderness we have destroyed ‘wilderness man’. In a way, that is the greatest loss of all, because this person could have been our real bridge to knowing wilderness and nature in the way in which it is known by the Creator and in which it should really be known.

I would like to tell you a bit about these people. It is not a romantic vision because, obviously, they had their faults too, and they were very human faults. But they were faults, in so far as I could observe them, that had no unnecessary complications to them. They were faults that were in proportion and that were incorporated and kept in position by the great necessities of nature, by the totality of their way of life. They committed themselves to nature as a fish to the sea, and nature was kinder to them by far than any civilisation ever was.

The one outstanding characteristic of these people as I knew them, and which distinguished them from us, was that wherever they went, they felt they were known. The staggering loss of identity and meaning that we in the modern world experience was unknown to them. As St. Paul says, “Then shall I know as even now I am known.” This sense of being known has completely abandoned us in the modern world, because we have destroyed the wilderness person in ourselves and banished the wilderness that sustained them from our lives. And because of the absence of this wilderness person in ourselves, we are left with a kind of loneliness, an inadequate comprehension of what life can be. We have become the greatest collection of human know-alls that life has ever seen. But the feeling that our knowing is contained in a greater form of being known has gone.

One of the most extraordinary things to me about these first people was their lack of aggression. I asked them if they had ever had war, and they said, oh yes, they had fought and were known as very great fighters. But except for when they fought against the Black and the White people, they had only had one war among themselves. I asked, “Was it an awful war?” And they said, “It was a terrible war.” I asked, “Were many people killed?” And they said, “One man was killed.” That was enough. One man. It didn’t have to be numbers. In this terrible world in which we live today, we think things only matter if we know them in numbers. We talk about the sum of human misery. There is no such thing in the wilderness. The sum of human misery is really an abstraction, because misery is never more than what one person can feel. It is inflicted on one person at a time. This misery was enough for them. And I asked, “What did you do?” They said, “Well, we decided that those of us who had done the killing should never meet again because we were not fit to meet one another.”
So they drew a line across the desert. And for centuries they had not crossed that line, in case they should take life again. They held the life of one person to be so precious. I asked them, "But how can you draw a line in the desert?"—because one side of it looked to me very much like the other. They always thought that I was singularly stupid and uneducated, and, of course, I am, in their terms. I was a baby, not even in the kindergarten class. And they said, "Well, you see, no two dunes are alike, no two plants are alike. It is part of our education to know what dunes and what plants are the dividing lines, and we never cross those dividing lines."

So there went a people to whom life was full of meaning. They always moved in small companies, and the groups I knew best never exceeded 23 in number. That was the entire community, and everyone was a clear-cut individual with their own individual gifts, making their individual contributions to their little society. There was none of the smearing and blurring of personality that we get in the mass societies of the West and of Asia. Yet to them, everything was family. They had no captains or kings, and the highest title they could bestow was to call somebody a grandfather or grandmother. The stars were part of the family too. The star Sirius, for instance, the great dog star, was grandmother Sirius to whom they prayed. They would say, "Oh grandmother Sirius, who sits there with a heart of plenty and so full of light, give us who do not have so much, some of your plenty." And they believed it happened and it helped. The whole of the cosmos was a family. They had an extraordinary feeling of kinship that burnt like a flame and kept them on course, that kept them warm and full of meaning. I have seen a woman at night hold her little boy up to the stars. I asked, "Why the stars?" And they said, "Don't you know the stars are great hunters hunting there in the outer dark? She is asking the stars to take from her son the heart of a little child and give him the heart of a star instead."

The sense of communion that these people had with the cosmos came out above all in their stories. There was nothing about which they did not have a story. There is one story that I want to tell you, because I think it sums up the importance of serving the truth, even if one has only a part of the truth which one can fulfil in one's own lifetime.

This is a story of a hunter. The people in the groups I knew all hunted, but there was always one man who was better at it than most. Often he also happened to be the musician. They had musical instruments shaped like a bow and the hunter who shot so well with his bow was often the one who also played beautifully on this wonderful bow stringed instrument.

The story goes that one day this hunter was out hunting and became very thirsty. He came to the edge of a pool—it was in the rainy
South African Zulus in traditional dress

Bushman Rock Art, Giant's Castle, Natal, South Africa. Original inhabitants of wilderness, 'first people', left an important and valuable legacy in their stories and art.
season—and bent down to drink some of the water. And as he looked into this pool which was deep blue with the midnight blue of an African summer's sky, he suddenly saw in the rippling mirror below him the reflection of a great white bird. He looked up quickly, startled, but the bird had already gone. But from that moment on he wasn't the same. He lost all interest in hunting. The people, because they loved him, tried desperately to revive his desire for hunting, but it had totally abandoned him. One day he said to his people, "I am sorry; I am going. I am going to find this bird whose reflection I saw. I have got to find it." And he said goodbye and vanished.

The story goes that he went all over Africa, all over what they then naturally thought of as the entire world. And whenever he came to places where there were people, he would describe the bird to them and ask if they had seen it, and they would say, "What a pity you didn't come last night, because the bird was roosting nearby." So it went on and on until, toward the end of his days when he was quite an old man, he came to an enormous mountain right in the heart of Africa. He asked the people at the foot of the mountain if they knew anything about this bird. And they said, oh yes, it came to roost every night on top of the mountain. So he climbed the mountain and when he came close to the top he found the summit was a sheer cliff which he couldn't scale. His strength was worn out and he knew he could go no further. He stood there looking into the red and scarlet sunset of Africa and thought, "I shall never see this white bird whose reflection is all I know." And he prepared himself to lie down to die.

Then at that moment a voice inside him said, "Look." He looked up and, in the dying light of the African sunset, he saw a white feather floating down from the mountain top. He held out his hand and the feather came into it, and, grasping the feather, he died.

When the Bushmen told me this story, I asked, "What sort of bird was this?" And they said, "The bird has many names, but we think of it as the Great White Bird of Truth."

Here we have an example of the instinctive symbolism of people who are spiritually 'aware'. The imagery comes naturally out of their being, putting them on the trail of truth, yet with a humility that does not try to grasp it all at once. Some of us here at the Wilderness Congress would like the whole of our wilderness dream at once. We are impatient, and feel if we don't get it immediately, we shall never get it. But in this story just the reflection of the bird, not even the bird itself, was enough to send a man on its trail—and one feather from that bird made his life worthwhile and allowed him to die content.

The processes of history work slowly. There are no short cuts in creation. Things happen by the planting and sowing of seeds, and do not appear all at once. We must have the humility of spirit to recognise how small, in a sense, is the success we can achieve in a single lifetime.
We can’t do it all. But what we can do is set things in their right direction, and I think that is beginning to happen. And as we do that, since life is universal and we don’t control it, something far greater than ourselves begins to work. This puts at our disposal, late as the hour is, time enough for the right things to happen. There is always time enough, no matter how desperate it is, for the complete thing to happen.

I would like all of us who are pursuing wilderness to take this in, and to know that if we follow in the way of the ‘wilderness man’, we too shall grasp a feather of truth. And that one day, one day that indeed will come, we shall be able to contemplate the whole bird in its entirety.

I would like you to reach out and believe this. I would like to make a pact with you that our wilderness dream will come true. The Earth today is wounded and sore. But our pursuit of the wilderness dream will bring about not only the protection of the wilderness such as we have it today, but also the rehabilitation of the Earth, with people able to live in the wilderness state of communion with it, following the White Bird of Truth.

This will come. Nothing can stop it, for nothing can stop a dream that is true. If you go back into the history of humankind, you find that in all the great cultures—the Greek, the Babylonian, the Chinese, the Japanese and our own—everything begins with a dream. Think of the dreams in our own Bible—of the tremendous dream of Jacob’s Ladder, for example. Think of the dream which started the great Greek Homeric saga of the Iliad and the Odyssey, when a god sent a dream into the head of sleeping Agamemnon as he lay by the black ships on the great plain of Troy. It all starts with a dream. Until we can say at last, “Pass, world. I am the dreamer that remains, clear-cut against the sky.” That is a quotation from a poem by a friend of mine.

We cannot, today, recreate the original ‘wilderness man’ in shape and form and habitat. But we can recover him, because he exists in us. He is the foundation in spirit or psyche on which we build, and we are not complete until we have recovered him. Life not only involves being conscious of the moment in which we live, but also involves a vision of the future. And before we can live properly, before we can face the future, we have got to remember. There is a phrase that occurs over and over again in the Upanishads which says, “Oh man, remember.” We have got to remember the needs and hunger of our instinctive, intuitive natural self. It needs our consciousness, because without our consciousness it has no life. But without its prompting, our life has no meaning. In the modern world, we have become so engaged in doing that we have become divorced from the aspect of ourselves which gives us being.

The real task of every generation is to make what is first new and contemporary. The first people, the wilderness people, were not com-
plete. They needed something more which they were in search of, and there was an enormous act of evolution that had to occur. But in the lop-sided way in which the so-called civilising process takes place, one part that was glaringly lacking was pulled out of the wholeness and developed to the exclusion of others. In the process of developing it, we fell into the heresy of thinking that that was the lot, and of course it isn’t. What we need to do now, in very simple mathematical terms is to make the first the last, and to bring it up to where we are. We still carry around with us the world of nature within. We need to match that to the world without, to make the world without more and more an expression of the world within.

The reason we exploit, damage and savage the Earth is because we are out of balance. We have lost our sense of proportion. And we cannot be proportionate unless we honour the wilderness and the natural person within ourselves. That is where the balance comes from. Our greed and aggression and corruption by power comes from cheating that first person within ourselves out of his natural inheritance, as Jacob cheated Esau. The whole great progression of evolution as represented in the Bible is based on a monstrous act of deception which passed for intelligence. It is a form of intelligence and has to be seen symbolically, and I do not want to suggest that that development is invalid. It is valid, but we should recognise that it is not the whole story. Somewhere, beyond the walls of our awareness, the Esau side, the wilderness side, the hunter side, the seeking side of ourselves, is waiting to return.
By grey crags
the old, blue-headed,
red-stemmed Scots Pine
holds the wind in its sail,
long enough
to bring forth song
or tell the tale of great deeds
long, long ago,
when it was young.

Finlay MacRae
WILDERNESS
Focus on Scotland
It is the strong conviction of the United Kingdom Government that the natural environment of this country is a precious asset. By the definitions that some people use, we may not have much wilderness, but we have large areas of virtually uninhabited territory and great opportunities for outdoor recreation of all kinds.

As new needs arise, further changes in the Scottish landscape are inevitable, and it is important that proposals for development ensure the maximum benefit to the community while also avoiding significant damage to the environment in which that community lives. In Scotland a well-established planning system provides for careful consideration of development proposals which have serious implications for the environment. A unique system of national planning guidelines sets out policies for the conservation of such precious assets as good farm land, outstanding landscape and sites of special scientific interest. The guidelines also indicate preferred areas for major industrial development and mineral workings. We are also in the course of considering—with local authorities, conservation bodies and development agencies—guidelines for skiing developments which will take into account

- The Central Highlands—The Cairngorms National Nature Reserve

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both the development potential for downhill skiing in Scotland and the need to avoid conflict with other uses of the land such as for wildlife or landscape conservation or for walkers and climbers.

I see no necessary general conflict between the social and economic development of the Highlands and the protection of the landscape and wildlife of the area. The development of the oil industry is a particularly good example of how resource development on a major scale can be achieved without significant damage to the beautiful wild areas for which Scotland is so renowned, but with substantial advantages for the well-being of remote and fragile communities in these areas. Over a period of ten years, nearly 100,000 new jobs have been created in developments largely or partly related to North Sea oil (many of them in the Highlands and Islands), 3,000 hectares of land have been used for terminals and processing industries, 2,000 kilometres of pipeline have been laid underground and 14 separate communities have been involved. Most of this development occurred within a very short space of time. Between 1970 and 1975 applications were considered for all five major gas and oil terminals, all the service bases, the four overland pipelines and some eleven platform yards together with 54 other developments. All these were approved rapidly without major objections and without the need for a public inquiry.

This was largely achieved by anticipatory planning. Aerial survey, information gathering and site assessments were carried out on the coast from 1972-74. Coastal Planning Guidelines were prepared recommending preferred conservation and development zones for oil and gas related development. When the actual applications arrived, working parties were set up between the oil companies, the local authorities and nature conservation interests early enough to influence the choice of location and to agree to methods of monitoring the environmental impact. Later an oil development forum of conservation agencies and amenity interests was set up to give them a better understanding of the need and opportunities for development and to offset ill-informed criticism of potential dangers or impacts that in many instances were avoidable or even non-existent.

To give some examples of the developments that took place, several of the major sites were in previously undeveloped areas of nature conservation, landscape or wilderness interest. At St. Fergus on the coast of Grampian where a large gas terminal was built, the sandy coastline is of considerable ecological interest, particularly the dune and wild fowl habitat. Informal early discussion with nature conservation experts and local amenity groups resulted in a site being chosen, with the agreement of the oil companies, which allowed the area to be protected. Subsequently a dune management group was set up with representatives of the developers, planning authorities and nature conservation bodies to monitor compliance with the planning condition that the
whole dune system—which had to be pierced to allow the pipeline through—should be managed as a conservation area. A similar working group at Nigg on the Moray Firth enabled the platform yard there to be sited in such a way as to avoid damaging a neighbouring wildlife site of national significance on the foreshore.

At Shetland, the most northerly group of islands in Britain, with a population of only 17,000, six different oil companies made commercial finds some 50 miles offshore. Six different pipelines and terminals would have destroyed the physical and social environment. The Islands Council obtained technical advice on the most suitable location for one major terminal and secured powers to acquire the land and control of the harbour. They then entered into negotiation with the oil companies for one association of the companies to set up the terminals as a joint venture. The result has been the construction at Sullom Voe of the largest terminal in Europe, capable of handling 1.4 million barrels per day and costing £1.2 billion. This was built in a manner which has attracted well-earned plaudits from environmental interests. The cooperation which was built up between the oil industry, the local authorities and conservation interests allowed the oil industry to develop rapidly to meet the economic opportunities, yet without significant detriment to the natural beauty of the areas in which it is operating. Where various parties share an understanding of each others' objectives and a willingness to cooperate in reconciling them, substantial necessary development can be accommodated and welcomed without serious damage to the environment. I believe the development of the oil industry in Scotland has demonstrated that this can be done.

Others can describe the extensive pattern of nature and landscape conservation areas in this country, covering 667,000 and one million hectares respectively; the nature reserves established by the Nature Conservancy Council and voluntary bodies; and the cooperation between local authorities and Government agencies such as the Countryside Commission for Scotland, the Highlands and Islands Development Board and the Scottish Tourist Board, which have provided in Scotland a widespread system of country parks, long distance footpaths, mountain, forest and water recreation areas.

With regard to the World Conservation Strategy, the United Kingdom Government fully recognises the importance of this Strategy and intends to give it the most searching consideration. Various UK conservation bodies are producing a report suggesting how the Strategy might be implemented; and, in their capacity as the Government’s advisors, the Nature Conservancy Council and the Countryside Commissions have been asked to suggest how best Government might respond.

There has been speculation as to the United Kingdom’s attitude to the World Heritage Convention of 1972. The question of UK
adherence to this Convention has been under consideration for some time, and I am now happy to announce the UK Government’s decision to ratify the Convention. This will be done as soon as the wishes of UK dependent territories have been established. We will then consider appropriate areas for identification in terms of the Convention. The UK has of course long protected its natural environment under its domestic legislation; and the formal ratification of the World Heritage Convention will be further international evidence of the United Kingdom’s continuing commitment to protection of appropriate aspects of the world’s natural and cultural heritage.
A Brief History of the Origins of the Scottish Wildlands

Drennan Watson

Fine tracery of larch trees against a low-lying Highland mist

In considering the Scottish wildlands, I have confined myself largely to the Highlands and Islands of Scotland, though there are considerable stretches of semi-wild country in the area of the southern uplands commonly known as the Borders. The Highlands stretch north from the northern boundary of the rift valley that cuts across the waist of Scotland and west from the coastal plains that stretch round much of the eastern coast. The rock of the Highlands and Islands is very ancient, ranging from 400 million years at the most southerly boundary of the Grampians, to nearly 2,000 million years in the Lewisian gneiss of the island of Lewis in the North West. The topography of the present landforms derives indirectly from a low-lying plain. This plain was uplifted to give a high plateau, probably not much higher than the summits of the present mountains, and rivers eroding back into this plateau produced the main river systems that persist to this day. The glaciers of successive ice ages deepened and steepened these to produce the classical ice-moulded topography that now characterises the Scottish mountains.

The climate of these mountains is a mixture of oceanic and subarctic and is not an easy combination for humans. The only important trend
across the spread of the land is that rainfall declines steeply as you go east. The summit of Ben Nevis on the west coast receives an annual rainfall of about 4,000mm but Cairn Gorm, some 90km to the east, gets only 2,200mm. Climate declines more rapidly with altitude than in almost any other mountain range in the world. Wind steadily buffets the islands and mountains, sweeping over the bare and treeless landscapes.

With the exception of small restricted areas of base rich material, the underlying rock is poor in minerals. This, combined with the heavy rainfall and low soil temperature, has produced heavily podzolised soils of low fertility, with extensive areas of acid peaty bog. The vegetation is thus largely characterised by grassy heathlands. The natural vegetation is dominated by northern forms of the boreal forest, except in the most northerly parts where only birch is extensive. On the low ground, oak is the natural dominant species. On the higher ground on poorer soils, and in the northerly areas, its place is taken by the Scots pine. Mingled with these are various other species such as common birch, silver birch, rowan and aspen, along with a number of shrubs. The original animal inhabitants included red deer, elk, reindeer and beaver, along with wolf, brown bear and lynx.

It is uncertain when human beings first entered this scene, but the early colonisers were only the first of waves of peoples that in time included Celts of various kinds, Anglo Saxons and Vikings. By the year 1746 their activities had fundamentally altered the vegetation of most of Scotland, with extensive clearing of forests for agriculture. Prolonged grazing prevented regeneration of trees, as did burning to clear large areas of "robbers" and wolves. With the habitat went many of its typical denizens. The lynx died out very early, while the bear lasted till about the 9th or 10th century. The beaver, once the basis of the country's valuable fur trade, probably lasted till the 15th century, and the wolf till the early 18th century. Nobody knows when the elk and reindeer disappeared.

1746 was the year of the battle of Culloden, a great watershed in Highland history and the beginning of much that was to affect the Scottish wildlands.

Culloden has always touched Scottish people more sadly than almost any other event in their history. This is not because it saw the defeat of Prince Charlie, but because it was the last battle when Scot fought Scot, and because of the fate of Highland society in the years thereafter. The Gaelic clansmen who fought at Culloden were the living representatives of the oldest society and culture in Europe, and one of the oldest in the world—the tribal society of the Scottish Highland clans.

Early Scotland was a land of several small kingdoms until the 8th century AD, when Kenneth McAlpine, ruler of one of these small kingdoms, managed to unite them under his rule by a judicious
mixture of murder and marriage among the other ruling families, particularly among the dominant Picts. Thus was established the Gaelic kingdom of Scotland, with much the same boundaries as it has today.

However, in 1058 Malcolm Canmore (Malcolm Bighead), a king of largely English upbringing, succeeded to the Scottish throne, thanks largely to a policy of vigorous and selective murder of more senior claimants to the throne pursued by his immediate forebears. This introduced another major influence into Scotland, which overthrew the dominance of Gaelic civilisation and eventually produced the Scotland of the two cultures who were to battle at Culloden. Malcolm Canmore also introduced the system of feudal land tenure, which is still today the basis of Scots land law. At the same time, his queen and second wife, the blessed and determined St. Margaret, Romanised the old Celtic church.

In the 13th and 14th centuries the country came under attack from the imperial ambitions of England. The sheer brutality and ferocity of the punitive campaigns of the armies of Edward the First of England aided the evolution of a sense of national identity in Scotland which, under the leadership of resistance leaders such as Wallace, Moray and then the superb and brilliant Bruce, became the rock on which English ambitions foundered at the battle of Bannockburn in 1314.

When the seed of the Bruce eventually failed to produce a stable and enduring dynasty, the royal house of Stuart succeeded to the throne and attempted further to strengthen the authority of the crown, especially in their remoter Highland lands. However, bad luck, Stuart ineptitude and the difficulties of the mountainous terrain, all led to the failure of this policy. In the power vacuum that was left, the tribal system known as the Scottish clans evolved as a development of the ancient Celtic tribal tradition, and as an effective system of self-protection.

‘Clan’ is an anglicised form of the Gaelic word for children, and reflects the underlying belief in the clan as representing the descendants of one person. Hence the importance of the prefix ‘Mac’ meaning ‘son of’ in Scottish names. The function of the chief included almost all aspects of looking after the interests and welfare of his people—the children of the clan. His chief function, however, was to maintain the fighting strength of the clan and lead it in battle.

One disastrous result of this historical development was that it produced a growing gulf between Highland and Lowland Scottish societies, with a Lowland view of the Highlands as the haunt of barbarians and the source of raiding bands of cattle thieves and rebellious Highlanders. The union of the crowns of Scotland and England in 1603, and of their parliaments in 1707, did little to help matters. Neither did the supplantation of the Stuarts by the house of Orange in 1688 and later by the house of Hanover. Serious social problems were
developing in the Highlands that the clan system could not handle. The Whig governments of the 18th century, with their almost bottomless corruption and stunning impotence, made matters worse. It was probably desperation born of this situation, rather than a romantic loyalty to the Stuarts, that fuelled a series of rebellions that burst out of the Highlands in these years, culminating in the rebellion of 1745 and the battle of Culloden in 1746.

The 1745 rebellion finally decided the Whig government that the clan system must be destroyed, and they proceeded systematically to dismantle it, principally by converting chiefs into feudal landowners and removing their inherited obligation towards members of their clans. This, combined with a population explosion and with changes in Highland land use, was to have fateful results.

In the century after 1745, the Highlands’ population increased by about 50% to its highest ever level of around 400,000. This was due to several factors, including the introduction of the potato and inoculation against smallpox. Poverty, destitution and hunger increased, and with it the rate of outmigration, which was further encouraged by the government’s substantial road-building activities that for the first time made the Highlands comparatively accessible.

Simultaneously, changes occurred in the agriculture of the area that were to have dire results. Traditionally, Highland agriculture had been a mixed pastoral one, based on common grazings holding cattle, sheep and goats. A system of transhumance, known as the shieling system, was widely practised, whereby stock were grazed on the low ground from autumn to spring, but summered on the high pastures, leaving the low ground free to be cropped for hay for winter keep. The cattle were particularly important to the cash economy of the area. Far more were reared than could be overwintered, and the surplus were annually driven to the southern markets over a system of tracks and routes known as the ‘drove roads’, and eventually the meat fed the people of the larger population centres in the south.

From about 1815 onwards, this market was gradually lost. A new style of agriculture was spreading over the Highlands, based on extensive sheep farming using introduced breeds of sheep. This system required large areas of open range and little labour. Many landowners began to regard the inhabitants of the land as a burden on the land and an impediment to ‘progress’ and profit. The feudal system of land tenure created a fateful link between land ownership and power, and allowed many landowners to clear their lands of this burden. Some did this with a ruthlessness that has become legendary, not only in Scotland but wherever in the world the cleared Highlanders went. Sometimes these landowners were incomers, bent on increasing profits from their newly acquired lands, but equally often they were descendants of the patriarchal chiefs, untramelled now by obligations towards
their people. Often the people were moved to coastal areas and encouraged to take up work in fishing or the kelp industry, to further the profit, in most cases, of their landlords. Each family thus settled was given enough land to earn part of its living by agriculture, but not enough to earn all of it lest this deplete the labour available to the kelp industry. Thus was founded the crofting lifestyle that survives over much of the Highlands and Islands to this day.

Not all Highland landowners indulged in these inhumane clearances, and some were at least in part motivated by the belief that the desperate plight of their tenants required desperate measures. Poverty and famine also played a great part in causing the migration that cleared the Highlands of much of their population.

Thus the 'wilderness areas' of Scotland were becoming largely delineated along the lines we see them today. Much of the upper areas, with their shortage of ploughable land, vicissitudes of climate and infertility of soils, have never been permanently settled. Nonetheless, large areas that once supported sizeable populations are now deserted, leaving wild unpopulated areas such as Knoydart.

It is important to realise that the attitude of today's indigenous population towards the Highland lands is still dominated by the memory of the clearances. The wilderness areas of Scotland, with the exception of the Cairngorms plateau, are not as nature left them but have been substantially deforested and otherwise altered by human beings. In the minds of most Highlanders today these lands are not among the nation's treasures as wildlands. Rather they are lost lands, the lands of their forefathers. In some essential and fundamental way they are their lands, and need some day to be reclaimed and made productive again. In an area with few jobs and high unemployment, this seems a much more attractive prospect than making them into 'designated wilderness areas', since such people equate the word wilderness with wasted land, the graves of their forefathers and former communities. Politically, this is a major factor for any 'wilderness movement' in Scotland.

Even as 'the great sheep' was spreading through the Highlands and ousting the human population, another trend was following that would in turn oust it—the growth of the sporting estates. Also contributing to the decrease in sheep farming was a decline in prices for sheep products as cheaper imports flooded in to Britain from the Empire, as well as the deterioration of pastures under purely sheep grazing as more nutritious heaths and grasses were selectively grazed out and swards became irreversibly dominated by less nutritious grasses such as moor mat grass.

The industrial revolution had produced a new wealthy class, who turned to the Highlands for sport and leisure. The interest and patronage of such influential members of society as the Duke of Bedford and later the Royal family itself, encouraged this trend. Though
Red deer stag (*Cervus elaphus scoticus*)

A Highland Stalker
grouse and salmon were important quarries of the sporting fraternity, it was the red deer that was the aristocrat of the hunt. From the mid-19th century onward, deer forests—large areas of land given over exclusively to the hunting of red deer—became increasingly widespread. By about 1912, an incredible 20% of Scotland’s land area was given over more or less entirely to the hunting of red deer by a small fraction of the populace.

Hunting lodges and extensive paths were built in wild areas, and there were further clearances of people from hunting areas. As a result, the total area of wild land—land without human artefacts and largely without human inhabitants—at this point probably reached a maximum in Scotland to date.

The era of the sporting estate saw further serious and ruthless depredations in Scottish wildlife. The elimination of all raptors and other carnivores, including even fish-eating birds such as mergansers, was considered part of efficient estate management. Thus the sea eagle, osprey, polecat, goshawk and various others became extinct in Scotland, while other species such as the golden eagle, peregrine, pine marten and wildcat were persecuted to the verge of extinction. In this, the gamekeepers and stalkers were assisted by the Victorian collectors of eggs, plants, birds, animals and generally anything that moved or grew. This era, up to the beginning of the First World War (which drastically thinned the ranks of gamekeepers and landowners alike), marked a nadir in the levels and variety of wildlife in the Scottish Highlands.

Since the end of the Second World War, many previously persecuted species have revived. This is due partly to the comparative lack of keepers over sizeable areas of the countryside, and partly to the influence of voluntary and statutory protection agencies and appropriate protective legislation. The pine marten and wildcat have spread, as have the peregrine, harriers, buzzards and golden eagle. The osprey has returned, and the sea eagle once again spreads its great wings over the land.

However, the influences of the sporting estates continue to be destructive in several ways. Poisoning and trapping of protected species is still widespread. Further, in the last twenty years, hundreds of kilometres of bulldozed tracks have been created to give hunting parties easy access and to allow the easier extraction of shot deer. These tracks have often penetrated into previously roadless areas, are usually badly engineered, and are constructed with disregard to effects on landscape and soil erosion. Only recently, after much of the damage had been done, was some fairly mild legislation enacted against this practice. In addition, the standard of management in many of the sporting estates is low. Burning to produce habitats suitable for grouse is often badly carried out, and fires frequently run out of control. Deer numbers in deer
forests are often excessively high, preventing regeneration of shrub and tree layers, and divesting them of needed winter browse. Deaths due to winter starvation can be extensive, and deer carcases often litter areas of the hill in spring. The carrying capacity of the land for deer themselves is much reduced, and the habitats of many other forms of wildlife almost eliminated. The combination of overgrazing and burning is probably causing accelerated soil erosion and scree formation on many slopes, but this remains largely uninvestigated in Scotland.

Since the First World War, two other land uses have arisen that have affected the wilder areas of the Highlands—hydro-electric power and forestry. The development of hydro-electric power in the Highlands began as early as 1885, but it was chiefly after the Second World War that it proceeded apace. In the 15 years between 1948 and 1963, some two dozen schemes involving some fifty power stations were built. The trend finally ground to a halt in the 1960s against a wall of public opposition to schemes planned for areas in Glen Nevis and Lochs Fada and Fionn. However, it was the political pressure to use cheaper sources of power such as coal, rather than the cry to preserve wild or scenic areas, that was the principal factor in stopping a good idea carried too far. While some of these schemes served to increase the remoteness of areas cut off by rising waters in reservoirs, the associated dams, pipelines, access roads and powerlines caused very considerable intrusion into wild areas. Many lochs were greatly damaged in their value for scenery, wildlife and recreation by the rise and fall of their waters, exposing and recovering their margins.

Intensive forestry began in the Highlands after the First World War, following a German U-boat campaign against the British timber trade aimed at cutting off the supply of pit-props to the coal mines. As Britain’s stocks of home-grown timber were then extremely low, this stratagem would have been a fatal blow to the coal mining industry, and thus to the iron smelting which supported the munitions industry, and almost succeeded in winning the war. Consequently, to develop a strategic supply of standing timber, the Forestry Commission was established after the war, and government encouraged planting by private landowners through tax benefits and planting grants. Intensive forestry has continued to expand ever since. Because of its techniques of dense planting (mostly of exotic species), deep ploughing, and high fencing to exclude deer, it totally destroys the wild qualities of land wherever it is practised. Once well established, the plantations cannot even be penetrated. Though they have aided the spread of some forms of wildlife such as roe deer and red squirrel, they generally harbour impoverished communities. In recent years there have been increased requirements to landscape these plantations in certain areas, but there has been inadequate restraint in the development of this land use.

The growth of organised lobbies to defend wild areas in parallel with
these trends has been patchy and irregular, though it has a long and curious history. It was the influence of Sir Walter Scott, the great Scottish writer who invented the novel, that did the most to cause a volte face in the average Scot’s perception of the Highlands. Previous views of these areas, noticing all too clearly the sad state of the inhabitants, had viewed the wild beauty of the mountains as a dreadful prospect, and the wild lands as just so much land that was totally wasted till properly tamed. Scott’s novels, with their romantic tales of the Scottish Highlands, their warlike inhabitants and savage mountains, put forward a new view that was intensely aware of the beauty and appeal of the landscape. However, as this outlook either ignored the condition of the less fortunate inhabitants, or adopted some ill-informed romantic view as to their condition, it was in a sense as unrealistic as its predecessor. Nonetheless, Scott established that romantic attachment of Scots to wild Highland scenery and its peculiar association with national pride that was a reflection of his own deeply patriotic feelings.

By the mid-19th century, wilderness appreciation ran strong among a group of men of letters and affairs which included James Bryce, an associate of John Muir, another Scot. Bryce even tried to get a bill through Parliament giving freedom of access to moors and mountains in Scotland, though the attempt failed.

In 1890 he became the first president of the newly-formed Cairngorm Club, and in the same year the Scottish Mountaineering Club was formed. After the First World War, many climbing and mountaineering clubs were formed in Scotland, partly as a result of the increasing availability of public and private transport, including the push bike, which gave more access to the countryside. Widespread unemployment during the great depression also caused a movement into these activities in the Scottish hills that for the first time involved the working class. Mountaineering had previously been a ‘gentleman’s’ leisure pastime until unemployment gave the working classes involuntary leisure. Since the Second World War there has been another and greater increase in persons going into the mountains, with the increased use of the private car being an important contributory factor.

The increase in appreciation of wild and mountainous areas was not, however, paralleled by their protection or even by political organisation of their users to protect them. Although individuals like Tom Weir and W.H. Murray have been active in various causes in the past, they have till recently remained isolated voices, without the backing of a large and organised constituency. Recently, however, there have been signs of this changing, with some significant steps being taken towards the protection of our finest mountain areas. Most importantly, from the early 1930s on, the National Trust for Scotland has been enabled, largely by money contributed by several wealthy mountaineers, to buy
some of the finest areas as they have come on the market, including Ben Lawers, Glencoe and parts of Torridon. Despite considerable political activity in the 1940s, however, and various proposals about national parks, etc., nothing effective has ever been done. To this day, the protection given to the most important wild areas such as Knoydart (recently proposed as an army training ground by the Ministry of Defence), the area around Lochs Fada and Fionn, and above all the Cairngorms, is flimsy in practice, despite designations such as National Nature Reserves and National Scenic Areas that look good on paper. Increasingly, it is public opinion that is their most effective protection, and since there are still proposals for hydro-electric schemes in areas such as around Loch Lomond and Loch Maree, and since many of our finest national estates, like the land around Loch Lomond or in the Cairngorms, can still be bought and sold like baubles by anyone in the world wanting a private sporting playground going cheap, there are likely to be battles ahead.

This likelihood is raised by the increasing instability of land ownership in the Highlands. It is difficult to run Highland sporting estates profitably, for they were never set up as economic entities but rather as the playgrounds of rich men who could afford to support them. With the economic depression, fewer people have been able to afford to pay for sport of this kind, and even fewer to run the estates. Thus increasing areas of wild land have come on the market. In addition, a new kind of landowner, ‘the institution’ (pension funds etc.) has appeared, providing an even more remote landlord.
Wilderness is an emotive word in Scotland. To many it suggests the inhibition of production from the land and the removal of people from the countryside. In Scotland, wresting a crop from the ground has been a toil against climate, bog and rock, and as a result the improving hand of human beings has been seen as bringing a cultivated productive landscape and a better way of life. As late as the 1790s James Robertson wrote: “All unproductive land which is abandoned as unimprovable may be called waste (or wilderness).”

When Thomas Pennant visited Bruar in Highland Perthshire during his Scottish tour in 1770 and wrote “It is but late that the Scots became sensible of the beauty of their own country”, he was remarking on a new attitude which was developing under the influence of the writings of Sir Walter Scott and Robert Burns, and as a result of better living conditions. This change of attitude paved the way to the present-day concern about wild places and wildlife in Scotland.

Today ‘wilderness’ encompasses both people’s attitudes and perceptions about certain places, and its meaning is certainly not as simple as the term ‘waste’ used by Robertson and others in the 18th century. To many, wilderness suggests a quality of remoteness, naturalness and beauty often associated with uninhabited and largely inaccessible land.
where wildlife is undisturbed, and where those visiting it require some degree of physical and mental resourcefulness.

In Europe, real wilderness exists in northern Scandinavia, Greenland and Iceland, where there are large areas of uninhabited natural landscapes often barely accessible. In Scotland, although some of the qualities associated with wilderness are to be found, the situation is different, for Scotland is inhabited, and it is this that distinguishes the wild places of Scotland from real wilderness. Small rural communities continue where there is better land and where forestry, fishing, recreation and, to a much lesser extent, industry provide modest employment. Paradoxically these communities are the guardians of our hills and wild places, since without them a rather different kind of wilderness might develop.

Today only about 20% of Scotland’s land surface can be described as good agricultural land, lying mainly in the south and along the eastern seaboard. Much of its quality is due to the work of the 18th and 19th century improvers, who drained the land and carried off endless stones. Eleven per cent of the land is under managed forest, 70% of which has been planted since the Second World War. Native forest—Caledonian Pine and mixed deciduous woodland—exists only in small isolated remnants. Most of the rest of the land is described as rough grazing and hill, with about 10% of the whole country lying above the 460 metre contour. Much of the rough grazing area supports sheep and red deer and includes grouse moors. About 9% of Scotland is designated as
Sites of Special Scientific Interest, rising to nearer 14% north of the Highland Line, where it includes blanket bogs, arctic alpine vegetation, important birds of prey and remnant woodlands, and where the nature conservation interest generally is recognised internationally. Just under 13% of Scotland is designated as National Scenic Areas and a high proportion of these lie north of the Highland Line.

Proportionally, Scotland’s population has four or five times as much space per capita as south of the Border. However, 80% live in the industrial belt, making Scots predominantly urban dwellers. It is in the uplands north of the industrial belt and the Highlands Line that high rainfall, low temperature and acid infertile rock make themselves really felt, and where there are comparatively large areas with little habitation.

However, most of Scotland’s countryside, even the hills and uplands, have been influenced by human beings and are not therefore truly natural, except perhaps above the 700 metre contour. The countryside today is very different from what it was like in the 16th century, when there was certainly more woodland and scrubland, fewer deer, more cattle and no sheep. Much of today’s beautiful naked hill landscape is the result of over-burning and over-grazing, which in places still continues today. The Highland landscape, largely shorn of its cover and some of its soil, is fragile and easily marked by human impact, particularly in the high sub-arctic hills where people and animals cannot live and only arctic flora inhabits sparsely.
The inherent problems of land quality in the Highlands and Islands which restrict its development for agriculture have led to extensive sheep farming, with densities as low as one ewe to four hectares in north-west Sutherland. Though sheep, along with red deer, can inhibit tree regeneration and contribute, along with burning, to the destruction of native woodland, their presence hardly intrudes on the remoteness of the hills. Acid soils and high rainfall can provide suitable conditions for the planting of trees, but exposure, bog and rock can inhibit tree growth, thus limiting the potential extent of new forest—forest which can create its own special qualities and wildlife habitats, while contributing to the local economy. The right balance between forests (including native remnants) and red deer, whose numbers have expanded greatly in the last 50 years, has yet to be achieved.

Because the Highlands and Islands are not a wilderness, individuals, groups and government organisations have sought to keep people in the hills and glens and to help create employment opportunities for them beyond the difficult and limited agriculture on which, along with fishing, they used to survive. This is not easy. So far forestry, modest tourism and recreation have the best track record.

Paradoxically, it is not production from the land that today threatens the qualities of remoteness and undisturbed wildlife, particularly vegetation, in the Scottish Highlands, but rather the development of recreation, if this is not properly planned and guided. The rise of the motor car and car ownership has given people a mobility unseen by previous generations and has provided the opportunity for many town dwellers to visit and enjoy the countryside. Much of the wilder remoter country unsuitable for any intensive use has been turned over to some form of recreation, and this has given rise to new pressures. For over a decade the Countryside Commission for Scotland and others have addressed their efforts to how to conserve the countryside under these circumstances, to help people understand it better and make them more aware of its sometimes fragile characteristics, and yet also to contribute to their enjoyment.

One of the threats to the countryside in the development of recreation is the conflict that may arise between different kinds of recreational activity. The concept of different kinds of countryside recreation, ranging from the gregarious to the solitary, from intensive use to occasional use, is not always fully recognised. For example, the potential conflict between downhill skiing with activities such as hill-walking or climbing was central to the use of Lurchers Gully and the public inquiry which investigated the issue. Another example is the construction of hill tracks for sporting (hunting) purposes, which increases vehicle accessibility to some of the remotest hills.

In a report on *A Park System for Scotland*, the Countryside Com-
mission discussed the relationship between different kinds of countryside recreation and conservation, and said: "The overall responsibility for enjoyment of the countryside must take account of all types of activity. The generalisation that man is a gregarious animal does not reduce the importance of providing for enjoyment alone or in small groups....The conservation responsibilities must run hand in hand with the intensities of recreational use, and outdoor recreation objectives should be seen as providing as strong a support for countryside conservation as might arguments based on other values such as landscape character or wildlife conservation."

The key to maintaining the remote and undisturbed qualities of the hills lies primarily in the limiting of vehicle access, particularly of so-called non-traditional vehicles, while also taking account of the need for forest roads, access for stock feeding, and to some extent sporting interests.

Ways through the hills on foot are traditional in Scotland and were developed for cattle droving, raiding or journeying. Some of these paths remain today and parts have been incorporated into new long-distance footpaths such as the West Highland Way, designated by the Secretary of State for Scotland under the Countryside (Scotland) Act. These provide attractive walking routes through hill country, but do not and should not penetrate the wilder and remoter mountain areas.

Over the last 20 years skiing has become a major recreational development in the countryside, with the development of uplift facilities used in summer as well as winter. Much more thought needs to be given to both where and how such developments should be sited, with a recognition of both conservation interests and other kinds of recreation.

There is still room in the Highlands of Scotland for different kinds of recreation and for, hopefully, expanding economic activities. However, if we are to conserve the whole quality and experience of the hills, a careful balance of use, access and appropriate development must be found. It is no longer acceptable that these kinds of issues be the subject of uncoordinated and ad hoc decisions. There is a need for better planning, for a better framework within which to take decisions in a place like the Cairngorms, and for taking a long-term and not just a short-term view.

North of the Highland Line is not a wilderness, though it has some of the qualities associated with wilderness. It is a place where people live, and has very special and sometimes unique qualities. It is a place which needs very special care and encouragement.
Wilderness Values and Threats to Wilderness in the Cairngorms

Adam Watson

Wilderness is a concept of the human mind, not an objective description of an area. It emphasises our perception of solitude and beauty, and our understanding of nature, in environments which are essentially as nature left them. As environments world-wide become less natural because of the impact of modern industrial society, even partly altered environments become important to the many who appreciate the values of wilderness experience at first or second hand.

Some say there is no real wilderness in the Scottish Highlands. In fact, nowhere in the world is there now absolute wilderness, unaffected by industrial society. Radioactive pollution, acid rain and increases of carbon dioxide have spread all over the globe. There is now only relative wilderness. On this relative scale, the arctic-alpine zone on the Cairngorms would rate high, and some of it very high. Smaller areas on other Highland hilltops would also rank high, along with much of the coast, substantial tracts of ancient pine and birch forest, and some wetlands. The fairly natural upper moorland in the Cairngorms would rate fairly high.

The bulk of the extensive Highland moorlands is land degraded by deforestation, burning and over-browsing by sheep and deer. Never-
theless, this land—even some of the lower moorland—has a much more natural vegetation and animal life than do the coniferous plantations or agricultural grasslands which are the two commonest changes in British moorland, due to big subsidies of public money. The vegetation is semi-natural, and virtually natural on exposed high ridges and unburned moors near exposed coasts. Even the more altered parts of it below the potential tree-line and scrub-line have a semi-natural vegetation; many species occur naturally in the ancient forest as an understorey, and others abound in the more open conditions of the forest bogs.

At a distance the moorland looks like a subarctic tundra, and the higher moors have a wet, oceanic, subarctic climate. The lower moorland, even though greatly affected by humans, has developed into a semi-natural tundra-like environment which does not occur on a large scale in Europe outside Iceland and the Atlantic Scandinavian coast. Moorland below the potential tree-line in western Ireland and the Scottish Highlands thus formed important world sites for the International Biological Programme’s Tundra Biome studies. Even the least natural moor can provide a strong experience of wilderness, particularly in deep, hard-packed winter snow when it resembles the undulating surface of an arctic ice-cap.

The Cairngorms form the largest block of relatively natural wild country in Britain, and the most arctic-like area in the EEC countries, with interesting arctic plants, animals and landforms. They are Britain’s foremost area for nature conservation and wilderness, and one of the foremost for hill walking and other mountain recreation. The value of the Cairngorm National Nature Reserve as a wilderness area is enhanced by its relative accessibility to urban people.

I know the Cairngorms not only as a scientist who does research there but also, since the age of 13, as a hill walker and later a climber and cross-country skier. Almost as far back as I can remember, I have had a deep love and affection for the area, and have received much inspiration from it. There is nothing odd about a scientist speaking of love and inspiration: both are important for good science. But in themselves they are not enough to defend wilderness against modern threats; good, rigorous research is needed too, and helps all sides come to sensible decisions that provide the greatest benefit to most people in the long run.

The higher parts of the Cairngorms were too infertile and had too severe a climate for much human exploitation. Although formerly used for summer shielings and stock grazing, most of the high glens never had farms. Nevertheless, tree roots in the moorland peat bogs show that the lower moors were formerly a forest. Most deforestation had occurred by 1650: Ritchie and others have exaggerated the deforestation from commercial exploitation in the 1700s and 1800s. On the lower
slopes, the relics of old pine and birch still comprise the largest area of near-virgin boreal forest in western Europe. Even in the extensive boreal forests of Scandinavia, centuries-old trees such as in Scotland are uncommon, except in a few small reserves.

The lower glens had small human settlements, but some were cleared in the 1800s. Most glens, however, emptied because tenant farmers left voluntarily, often in the last 40 years. Some glens are a sad sight with ruined houses, and in others most houses are holiday homes, with scarcely a local community left.

The moorland zone in and near the Cairngorms is extensive and varied, and contains the most remote ground in the east Highlands. It supports important populations of golden eagles and peregrine falcons, which showed less contamination from toxic chemicals than elsewhere in Britain during the years of marked global contamination of birds of prey in the 1960s.

Wilderness values in the Cairngorms have come under increasing damage and threat, particularly since 1960. Roads, lifts and other access facilities for downhill skiing have led to large-scale damage to wildlife, severe soil erosion, and flood damage in and near ski grounds. Crows attracted by food dropped by tourists have come from the valley to roam the high ground, where they rob nests of hill birds and greatly reduce the breeding success of ptarmigan. Ptarmigan have become virtually extinct on the ski grounds at Cairn Gorm, due to their flying into the ski-lift cables.

There has been a failure to balance tourist developments with what the hill can withstand. The easy access of chair lifts in summer has attracted thousands of people who would not otherwise have gone to the high plateau outside the ski grounds. This, the most outstanding arctic-like part of the Reserve, has also suffered locally severe vegetation damage and soil erosion. It will take decades to recover, and in some exposed places probably centuries. The Nature Conservancy Council, the government organisation charged with managing the Reserve, cannot control damage on the plateau as the cause of it—easy access from the ski grounds—is outside their control. This demonstrates the importance of a buffer zone with controls, as a protection for the core of a nature reserve or wilderness area.

The proposed road, chair lifts and other facilities in the Lurcher’s Gully scheme in 1981 provoked the biggest conflict so far on a mountain issue in Scotland. Many people, having seen the construction litter, bulldozed pistes and soil erosion on the ski grounds, objected to this proliferating south-westwards towards the heart of the massif. The Lurcher’s Gully Public Inquiry was unnecessary in the sense that, given proper anticipatory planning, such an area would have been out of bounds to development, which would have saved both sides money and time. However, Lurcher’s proved a major turning point. For the
Recreation: Ski development on Cairn Gorm

Forestry: Tube seed planting in deep ploughed furrows
first time hill walkers, climbers and skiers, together with voluntary wildlife conservation bodies, joined those with a growing appreciation of the wilderness aspects of nature conservation, raising funds and preparing evidence for the Inquiry. They are now tackling other environmental issues in the Highlands.

At the Inquiry, confrontation was mentioned between local community and outside conservationists who oppose development. However, many conservationists say that what they seek for environmental protection in the Cairngorms is what is best for the long-term sustainability of local people. Most developers themselves have in fact come from outside the Highlands, and much of the population increase is due to outsiders to whom many of the jobs have gone; local people have tended to get menial work. Over-development of hotels and other tourist facilities at Aviemore has harmed smaller communities in Speyside. Compared with the Swiss Alps, Highland communities lack control of land and decision-making, and hence are not in charge of their own destiny.

A long-standing problem of nature conservation is that the relics of old forests are dying because severe browsing by too many red deer prevents tree seedlings from growing. Subalpine scrub above the potential timber-line has been almost wiped out by deer browsing and burning. Hill tracks bulldozed to ease access for deer shooters have been allowed far inside the Reserve, and caused severe soil erosion. Recent regulations to bring construction of such tracks under planning control were violated in 1983. High deer stocks also cause serious soil erosion. The worst-damaged hillsides have so many deer tracks and such heavy grazing that they are largely bare, with many gravel slides and gullies. Such land management is not sustainable in the long run as it severely damages soil, the resource upon which all life depends. The shooting of red deer for sport, a dominant land use over most of the Highlands, clearly conflicts with nature conservation interests in the Cairngorms.

The only solution is to cut deer stocks until monitoring of seedlings, ground vegetation and soil shows trends towards recovery. In the most heavily used glen bottoms, even big reductions of deer may not be enough to restore the more palatable hardwood trees and hardwood scrub; fencing and elimination of red and roe deer may be necessary. The eventual aim would be to increase greatly the ratio of low-ground forest to wintering deer.

Although Scottish Caledonian pine woods cover less than half per cent of Britain’s woodland area, intensive modern afforestation with its fencing, ploughing and dense, uniform planting is a major threat. The Native Pinewoods Grants are resulting in afforestation next to the old woods, even though some owners would prefer natural regeneration. Many believe that grants on such ground should be run by the NCC rather than the Forestry Commission, with no grants for plantations.
next to old woods and with all the incentives going into natural regeneration.

The NCC owns only 12% of the Cairngorms National Nature Reserve. Management of the rest, under short-term agreements with landowners, has not prevented serious intrusions on wilderness and damage to nature conservation interests, such as ploughing and dense-planting of exotic conifers in or beside old forest, and poorly made bulldozed hill tracks. As areas owned by NCC are better managed for conservation interests than areas with Nature Reserve Agreements, an obvious step is for NCC to aim to own more of the Reserve.

Protection of the rest of the area needs to be improved in order to rise towards international standards. The recent Wildlife and Countryside Act offers NCC a new opportunity to strengthen protection measures for wildlife and wilderness in the Cairngorms. The NCC now has to notify landowners of damaging activities on Sites of Special Scientific Interest (which include National Nature Reserves). Thereafter landowners must tell NCC if they wish to do a damaging activity, and NCC can compensate them for not doing it or buy the land by compulsory purchase.

Planning measures for protecting the Cairngorms area as a whole have clearly been insufficient. An overall management plan, with clear long-term aims and means for sound management of the area’s outstanding features, has been lacking for years. However, Grampian Regional Council is now showing interest in such a management plan.

A powerful voluntary movement of hill users has arisen in the last few years as a major challenge to developers, traditional land users and statutory bodies. The hill users press for the same better protection as wildlife conservationists. They seek a reduction of access facilities in places suffering severe damage, a stop to forestry plantations and bulldozed tracks, and a cut in excessive deer numbers to allow tree regeneration and decrease the cruelty of having many deer starving to death in winter.

The National Nature Reserve and the most outstanding ground outside it need special protection as a core area. Within it, NCC will achieve its aims of adequate nature conservation only if it gets the full backing of hill users and voluntary wildlife bodies. Outside the core there has to be a buffer where the local planning authorities operate tighter planning, in consultation with NCC and other bodies.

Events in 1983, with threats at Knoydart, Creag Meagaidh and Glen Affric, and with the Cairngorms as a chronic case, highlighted the lack of protection for Scotland’s best mountain areas for wilderness. We need to emphasise these cases and call for something better.
Looking towards St. Kilda from Horeray, on top of a 1200 ft cliff which houses the largest gannetry in the world.
The Seas Around Scotland

Hance Smith

A month old grey seal pup (*Halichoerus grypus*). The Scottish Islands contain over 60% of the world population of grey seals.

*(See the chapter on Marine Wilderness Areas and Multiple Sea Use Management (p. 103) for an overall outline of sea uses, the development of marine conservation approaches, and the problems of designation of marine wilderness areas.)*

The seas around Scotland are situated on the periphery of industrial Europe, and also open into the widespread influences of the stormy North East Atlantic. They are richly endowed with both living and mineral resources, with a strong demand for these in both industrial Europe and North America. The principal pressure on the marine environment is resource extraction, in contrast to more central sea areas such as the southern North Sea and Channel, where the full range of sea uses provides intense pressure and conflicts among uses.

The patterns of shipping activity derive to a substantial extent from these resource uses, the international shipping routes (Fig. 1) carrying a relatively low density of traffic and being of great strategic importance. Shipping activity generated by the offshore oil industry (Fig. 2) and at the shore terminals is associated with extensive safety provisions, notably in the arrangements for traffic management at Sullom Voe, which extend throughout most waters around the north of mainland Scotland and include aerial surveillance measures for oil pollution control. The other main foci for commercial shipping are the Firth of Forth, Firth of Clyde and the port of Aberdeen, while Lerwick and Peterhead have large concentrations of fishing traffic.
The offshore oil industry has indirectly generated the most pressure for environmental conservation, including institution of monitoring schemes both by the industry itself and other bodies, especially in the Shetland area. There is also considerable impetus for planning measures in the coastal zone, where the impact of terminals, engineering yards and service bases is concentrated. The numerous public inquiries associated with these schemes are a rich source of environmental data, and conservation interests are strongly represented. Offshore activities have a strong impact on the coastal zone, and the relationship between land use planning on the one hand, and the need to plan the sea on the other, can be clearly seen. The apparently low priority often given to environmental factors may be a reflection of the corporate decision-making in which both government and oil companies have been anxious to obtain a maximum rate of exploitation of petroleum resources during the build-up phases of the industry.

The waters around Scotland are rich in fish stocks, and a focus for all the northern European fleets. Scotland is also the leading fishing region in the UK. Fishing is arguably most pervasive of all uses in its geographical range and potential influence on marine ecology. Included are the pelagic herring fisheries of the North Sea, Minches and Clyde, and the trawling and seine-netting activity both on the shelf and near shore, where there are complex patterns of hard and soft bottom which may be profoundly affected ecologically by fishing. Crustacean and molluscan resources are located close to the shore in similarly complex ecological situations, as are the considerable seaweed resources. Salmon fishing requires integrated land and sea management on a North Atlantic scale. Fish farming is now of substantial importance on the West Coast and requires strict environmental conditions, perhaps as rigorous as those required for effective wilderness conservation.

Waste disposal and associated pollution hazards are relatively low compared to the southern North Sea, with the exception of the oil spill hazard, for which extensive emergency procedures exist. Land-based pollution hazards on a large scale are localised to the densely populated coastlands of the Clyde and east coast, together with the oil terminals and a limited number of large coastal installations such as power stations.

The evaluation of the marine environment, though at first sight somewhat piecemeal, has been considerable, mainly as a result of existing and perceived pressures due to industrialisation and recreation in the coastal zone, together with the offshore hazards of the oil industry. Scotland is notable for the comprehensive survey of the beaches instigated by the Nature Conservancy Council and carried out by the Geography Department of the University of Aberdeen; for the protection of seabird and seal colonies as a result of the influence of special interest groups; and for the current survey by the NCC of offshore
Figure 1  The coastline and navigation activities
Figure 2 The offshore oil industry
seabirds at sea. Perhaps the most significant, though not exclusively maritime, is the long-term monitoring work being undertaken in the Shetland area, including the establishment of an ecological data base by the Institute of Terrestrial Ecology. A considerable amount of marine archaeological work has also been undertaken in Shetland and elsewhere.

The sea areas around Scotland require a coordinated policy for marine wildernesses within a multiple sea use context. Such a policy may readily be conceived in terms of geographical areas and localities on the one hand, and effective integration with other uses on the other.

Quite apart from oceanic scale problems associated with, for example, salmon management or diffusion of radionuclides from nuclear re-processing plants, a substantial area with a Scottish administrative and political dimension is involved (Fig. 3). Whatever the outcome of the dispute settlement on boundaries, the sea area that requires management is several times the size of Scotland's land area. Much of it—especially to the west—includes the deep water of the Faroe-Shetland Channel and Rockall Trough. Favoured for wave generators, much of the western area is relatively little used, with inshore waters of high amenity value for recreation, conservation and fish farming. To the east, by contrast, the intensity of uses is much greater.

Within this vast area, only the waters around Shetland have been to any extent systematically considered from a management standpoint. These considerations have ranged from the likely maritime boundaries of a devolved Shetland sea area, through the ITE ecological survey, to the Sullom Voe Oil Spill Plan and associated monitoring and surveillance, and the framework for a fishing plan already put forward in the course of Common Fisheries Policy negotiations. There has even been a call for the creation of a marine park, and the Shetland Islands Council have powers to license works and dredging within the territorial sea. In Orkney and the Western Isles there are fishing plan developments, and generally there is increasing recognition of regional management approaches to the Scottish fisheries. Other notable administrative moves include the Coastal Planning Guidelines and the rationalisation of port management on the major firths.

From the conservation viewpoint, most progress has been made in the coastal zone with the designation under existing UK legislation of Sites of Special Scientific Interest and National Nature Reserves, which has resulted in conservation of seabird and seal breeding colonies and of certain geological, geomorphological and ecological sites. Relatively restricted areas are involved and thus, in theory at least, a sufficient degree of control may be exercised over use. Such an approach may profitably be extended to human artefacts, especially the protection of historic wreck sites.

The protection of habitats on a large scale by marine parks is a
development for the future. As the Exclusive Economic Zone becomes subject to the creeping jurisdiction of state power, it is conceivable that national park type legislation could be applied. At present this is unlikely as treaty arrangements over internationally disputed areas might be necessary. The position in Scotland might also be complicated by the absence of comprehensive national park legislation for land areas. In any event, the key management problem would be the integration of uses, possibly by the development of zoning policy similar in principle to that adopted for parts of the Great Barrier Reef, with combinations of uses for geographical areas legally specified. In such an approach it would be necessary to coordinate the existing conservation interests who could probably provide most of the data and expertise required (including environmental data bases), fisheries management interests, and all those users (principally navigational, oil companies, ports, recreation and defence) concerned with the establishment of fixed installations and routes.

Such a sea use planning approach has been widely advocated for all uses of the North Sea, and there is a substantial amount of research concerned with the data bases for such an approach. A preliminary assessment of the complex legal implications has also been made. It is likely that there is a long way to go politically before any such integrated approach becomes reality, but the pressure of events already points towards practical, albeit piecemeal, coordination of interests to safeguard the marine wilderness interest.
Human Nature

Robert Cowan

The crofting township of Howmore, South Uist

I would like to begin by saying somewhat nervously, if not in total fear and trepidation, that I am an unashamed, indeed professionally employed, developer. Many of you are predominantly on the side of conservation. My hope is that you may regard me as an endangered species, and so be gentle with me.

A developer is, as recent readers of the Financial Times will know, a person who wants to build a log cabin in the woods—while a conservationist already has a log cabin in the woods.

I have given this talk the title of 'Human Nature' because I wish to address the problem of increasing polarisation and conflict between those who profess a concern for people and those whose concern is nature. In doing this there are four propositions I should like to make: We are not a wilderness; development needs conservation; people must be conserved too; and conservation should be positive.

I have frequently heard Knoydart and other parts of the Highlands described as 'wilderness' or even 'the last great wilderness area in the UK'. This view displays a profound misunderstanding. Not since prehistoric times could the Highlands with any accuracy be described as wilderness—though it does contain huge areas of desolation caused
by human activity. This desolation is the result of several factors, particularly the over-exploitation and over-use of land, combined with people’s inhumanity to one another.

After years of bitter history, it is perhaps understandable that many Highlanders feel strongly when others describe areas that used to support large numbers of their ancestors as ‘natural wilderness’. We do not regard more recent examples of human-created desolation as wilderness (eg the West Midlands), so why the Highlands? As journalist James Hunter of *The Scotsman* said recently, reminding us of Frank Fraser Darling: “To describe the Highlands as unspoiled is to abuse both language and history.”

It is easy for us to agree in theory with the proposition that development needs conservation, but I could wish for more practical recognition of this. The World Conservation Strategy says that the positive goal of conservation should be maintaining ‘sustainable resource’ for development. I support this wholeheartedly, and would like to point out that the body I represent, the Highlands and Islands Development Board, is not exclusively concerned with industrial or even economic development. It also has a social remit and a statutory duty to ‘have regard to the desirability of preserving the beauty of the scenery’.

The increasing national awareness of the attractions of open spaces and wildlife is resulting in the development of a more intelligent and demanding tourism industry, and nowhere is better able to cater for a wide variety of interests and activities than the Highlands. Our tourism industry has benefited greatly from our wildlife, and you can be sure that developers do not want to kill off the wildlife that lays such golden eggs!

Furthermore, today’s newer and smaller industries no longer need to be located next to coal fields or large centres of industrial labour. I think electronic engineers and biotechnologists will increasingly choose to live and work in pleasant environments such as ours.

To address the point that people must be conserved too, today we are seeing—and I believe this is not wholly unrelated to the activities of the HIDB in the last 18 years—a reversal of a trend that has depopulated the Highlands and Islands for more than 100 years. Much of this can be related to our natural resources which include water suitable for building oil rigs or farming fish, agricultural land, trees, and fish in the sea around us.

In this sense, HIDB is very much a conservation body. We want to preserve and sustain the remaining human settlements in the remote parts of Scotland. The very rapid spread of conserved or sterilised land in recent years has, however, given many cause for concern.

Almost one third of the HIDB’s area—which in turn is half the land area of Scotland—has been designated for conservation in some way, such as nature reserves, scenic areas or Sites of Special Scientific
In the conservation vs development debate, each side often views the other in an extremist manner.
terest. Many people who live here are worried about when this process of sterilisation is going to stop.

However, this picture can be looked at from a different perspective. Half of the area classified in various ways by the Nature Conservancy Council is over 300 metres high, of little interest to developers other than skiers. Only about one third of it could be said to be suitable for development anyway, and much of even this area might be ruled out by other constraints—for example, inaccessibility or crofting tenure.

These figures illustrate how there can be two ways of looking at the situation, each supporting polarised views. In fact, so far there have been very few cases where conservation interests have prevented development.

In an endeavour to resolve this conflict situation, I must stress that much of the fault lies with conservationists. Not many people in the Highlands and Islands are in fact against conservation, but we are certainly against some conservationists.

The HIDB can and do work well together with responsible bodies such as the NCC and the Countryside Commission. But we must all resist the conservationists who are intent on deep-freezing the status quo and resisting all change at all cost. Even more must we resist the conservationists who want to keep the countryside for themselves and their elite bunch of friends who alone are sufficiently attuned to appreciate it. Conservation, if it is to be supported as it should, must be—and must be seen to be—for the benefit of people in general, and not just for mountaineers or botanists, for example.

What gets conservationists the bad name they undoubtedly have in the Highlands is that they too often say 'Thou shalt not' rather than 'Thou shalt'. There are many instances where positive developments can encourage conservation—for example, by replanting mixed forests of traditional species rather than regimented lines of Sitka Spruce. If money is to be paid to compensate for lack of development, then it should be specifically designated for local projects.

Most of all, conservationists should learn to speak with more local knowledge. Highlanders have a history of resisting government, either from Edinburgh or Westminster. Likewise, they do not want to be conserved from Bedfordshire.

My message, therefore, is a simple one: down with polarisation. Many conservationists see developers as 'baddies', while many of us in the Highlands see conservationists as perhaps a dangerous, creeping paralysis. Both views are unenlightened. Looked at from a different perspective, there is no reason why developers should not get together with conservationists, enjoy a fruitful marriage and live happily ever after.
Edge of the World: Fraser Darling’s Islands

Morton Boyd

Shell-sand beaches, dunes and machair at Seilbost, Harris which is a Site of Special Scientific Interest

“When I was a little boy the Garden of Hesperides, Hy Brazil and the Hebrides had a curious oneness in my mind. Two of these are mythical; the Hebrides are real but they reach into the legendary past and the limbo of my own mind and so however romantic they may have been in their beginnings in me, the Hebrides became a country which had to be trod.”

So said Fraser Darling, when, in his old age, he recalled his earliest childhood recollections of the Western Isles of Scotland. His inward vision was of the awe-struck faces of the first Hebrideans—those Mesolithic people of dark Mediterranean stock—as they beheld the Hebrides stretching north-westward into the sunset. He saw the milestones of humankind through the ages from the Callanish Circle to the missile launchers of today. There were reflections of people in a golden age of plenty sustained by the seemingly endless resources of land and sea. Seasons of winter poverty were offset in summer plenty by an indigenous culture of provisioning of food and fuel harvested within sight of home.
The golden age of the Hebrides, that time of plenty in a clement climate when people and environment were a harmonious whole, is more of the imagination than of historical fact. The sensitive balance between the needs of the population and the resources of land and sea was probably gained and lost many times in different islands, but the course of history is punctuated by a very odd collection of events, all of which affected greatly the way of life and the environment. Fraser Darling saw these as the arrivals of Columba, the Vikings, the potato, the sheep, paraffin, the steam windlass on the fishing deck, wrapped bread, long-life milk and Wellington boots—all of which are the outward symbol of great social and ecological changes. The sage saw the grand interrelationship of the elements of air, land, sea and people in the great drifts of shell-sand. Shadowy figures of yesterday, men, women and children, break the undulating skyline of the sandhills with heavy loads of seaweed on their way 'twixt shore and the life-supporting patches of potatoes and oats, grown often on feanagan, or cultivation ridging on shallow soils.

The tidal pool is a microcosm of the ocean, where the great generative power of the sea is in full display; sunlight and living creatures in the crystal setting of pure sea water. Seaweeds, molluscs, coelenterates, arthropods and sea squirts are all there in seeming chaos—yet the pool is fashioned for strength, stability and visual beauty. The shelving shores of the Hebrides provide an excellent substrate for a vast concourse of marine animals and plants which extract carbonate from the sea water. Their dead shells are fragmented by burrowing sponges, acmaeid limpets, chitons, echinoids, algae and fungi and are milled in the surf to produce a highly calcareous sand which occurs on the west coasts of the Outer Hebrides, Tiree, Coll and other smaller islands. This sand changes the ecology of the islands, giving an enrichment of agriculture and wildlife.

The combined effect of the weather, the sandy loam and the grazing of sheep, cattle and rabbits creates a unique maritime complex of grassland communities called the macbair. Sandwiched between the sand dunes by the shore and the peat moorlands which form the spine of the islands, it is often cultivated in long strips, all unfenced. Between macbair and moorland are the enclosed croftlands with their system of botanically rich fresh-water lochs which attract large numbers of water birds. The croftlands often possess old haymeadows, floristically very rich and excellent habitats for breeding meadow birds like the corn-crake which are now rare in other parts of Europe. Both dry and wet macbair have a wide assortment of recovery stages from cultivation and possess the highest breeding assemblies of dunlin, redshank and ringed plover in Britain. As a whole the macbair and croftland is both the basis of the agricultural economy of the Hebrides and a natural wildlife asset.
During 1983, an Integrated Development Programme for the Western Isles has been in progress through a 'less favoured' areas scheme of the EEC. Some £21 million were assigned for agricultural improvement over five years. The IDP has raised much controversy between agricultural and conservation interests which appeared to be in conflict, primarily over the improvement of stock production on machair grasslands. However, experience in the implementation of the programme has shown that fears that agricultural improvements would cause widespread harm to wildlife on the one hand, or that conservation restraints would be a blight on agriculture on the other, have not been borne out in practice so far. It is early days yet, but the machinery is on hand through a strengthened organisation on the ground and the provisions of both the IDP grants scheme and the Wildlife and Countryside Act to deal with the problems as they arise. In fact, there is a strong positive correlation between the numbers of breeding birds, plus the rich, floral hay meadows, and the number of native Gaelic speakers still crofting their land in their native tradition. If the crofting way of life with its traditions of small-holding agriculture is conserved in the socio-economic sense of the word, then there need be much less fear for the magnificent flora and fauna of the croftlands on machair, hill and loch. The IDP should be a comprehensive conservation experiment in which the way of life and cultural traditions of the Gael should be integrated successfully with that of the wildlife with which they have co-existed for several thousand years. Human beings and nature are, after all, two parts of one creation, and there is a fine opportunity in the IDP to demonstrate how this can be achieved in practice. As an example of conservation of both traditional lifestyles and wildlife, it is of wide international interest.

The islands of Scotland are on the extreme western edge of the vast landmass of Eurasia on the one hand, and on the eastern edge of the North Atlantic on the other. They are a microcosm caught between two enormous global systems of opposite character. Across the meridians eastwards to Central Asia and the Far East, plants and animals of the same genera—including that endangered species, *homo sapiens*—live on enormous ranges of habitat, producing species and races adapted to the needs of their particular home. Even the tiny archipelago of St Kilda, though bereft of its people, still has its own wren and mouse and ancient breed of sheep resembling the wild sheep of the High Pamir. Similarly, across the lines of latitude, the Hebrides are also in a crux position where Lusitanian and Mediterranean conditions fade into the boreal and sub-arctic, typified by the southern pink-butterwort at its northern limits and the northern red-necked phalarope at its southern limits. Geologically, this small country lies on the parting line of the Continental Drift of Europe and America, with the Archaean rocks of Scotland matching those in Labrador and Greenland.
Lunga, Treshnish Isles, Argyll, showing ruined house beside which Fraser Darling had his camp during his seal study in 1937.

An old hay meadow at Elgol, Isle of Skye, showing the density and variety of flowering plants which are now absent in such quantity from areas of improved agriculture. Towering behind are the range of the Black Cuillins.
There is little wonder that Fraser Darling and many other naturalists before and after him found a deep fascination in the Scottish islands. During his island years, Fraser Darling brought a new dimension to natural history, making it a way of life. His studies of deer, seabirds and seals were self-contained essays in ecology and animal behaviour, but he also saw in the small, remote islands a clear expression of ecological interdependence among living creatures and of the basic processes of life and death. He had an unswerving belief that people and nature are parts of one whole system and that our moral and political conditions are as potent ecological factors as rainfall and erosion, and he gave expression to this in the West Highland Survey in 1955 and in his Reith Lectures in 1969.

The position of the Scottish islands in the great marine pasturage of the North Atlantic is of great importance in seabird conservation. St Kilda alone has 17 species; recent surveys have shown the following numbers of pairs: over 100,000 puffins, 59,000 gannets, 40,000 fulmars, 20,000 guillemots and 11,000 kittiwakes. The many seabird islands lie close to the tracks of tanker traffic to and from the oil ports on both sides of the Atlantic, in particular the new terminals at Sullom Voe in Shetland, Flotta in Orkney and the Firth of Forth. Great care has therefore to be taken in the management of this traffic to avert oil spillage of any sort. The foundering of a loaded tanker in the Scottish
islands, particularly in summer, would mean a major seabird disaster, while continuous minor pollution from accidental spillages and clandestine tank washing might also cause devastation among seabirds in the long term. Happily, industry, government and conservation bodies are all jointly determined to see that such events do not occur.

The Hebrides, Orkney and Shetland remain a stormy frontier, yet the frontier is changing through modernisation of services and the pollution of air, land and sea. The remote outliers frequented by Fraser Darling and to which he found access so painfully difficult—North Rona, Sula Sgeir and St Kilda—can now be reached easily by helicopter. The notion of pure air and sea vanishes when the pollutants reaching Hebridean waters from the industrial mainland are measured. Traces of heavy metals and PCBs become concentrated in seabirds through their fish and planktonic food. These substances can affect the breeding success of the seabirds and also that of seabird predators such as the golden eagle, sea-eagle and peregrine. Seabirds and their predators are sensitive indicators of the cleanliness of the sea. Fraser Darling wrote:

“We shall try to perpetuate forest, moor, sand dunes, salt marsh, Hebridean islands and the denizens and vegetation of all these places but the national ethos has changed towards a greater respect for the natural world around us and a sense of trusteeship.”

The roots of the Gaelic and Norse cultures go down with those of the plants, into the shell-sand and peat, and the tenacity with which the people—Hebrideans, Orcadians and Shetlanders—hold to their islands may be likened to the holdfasts of seaweeds and shellfish on their stormy shores. Within the Islanders’ minds there is an awareness of the strength of nature—the immensity of the sky, the power of the sea and the benevolence of the land. Humans and wildlife in the Scottish Islands share a common destiny in the ritual of survival on what has been called ‘the edge of the world’.
Afterword

Wilderness: Trail to the Future

Ian Player

On the last evening of the 3rd World Wilderness Congress Colonel Sir Laurens van der Post and I talked in the Universal Hall at the Findhorn Foundation. To begin with I found it difficult to talk but I could sense the understanding and sympathy of the audience.

We had all been through an intense week of talks that ranged from Professor Meier's Jungian perspective of wilderness to a stunning lecture on the devastation of the Brazilian jungles by José Lutzenberger. Finlay MacRae, our magnificent Scottish chairman, had played the bagpipes and we had heard Gaelic poetry and singing from island people. From the opening ceremony in Inverness to the final indaba (gathering) there were very few delegates who were not moved by the emotional atmosphere and the extraordinary kindness of the local Scots and the multinational people of the Findhorn Foundation who were the hosts to the Congress. The role of spirit in wilderness had full rein and after a moving speech or the fading notes of the bagpipes many people including myself had tears in their eyes.

It was a most difficult congress to organise. Vance Martin and I, with the help of Sir Laurens van der Post, had struggled to ensure that it took place. Raising money in the United Kingdom met with little tangible response, though the concept received much praise. A whole year passed before we had our first donation—£50. We were on the point of giving up, but synchronistic events led to a dribble of money, just enough to keep us going. Delegates were slow in registering and some speakers took months to reply. It was only the knowledge that we were working for a cause far greater than ourselves, and the support of wonderful conservation friends in Britain, the United States, Australia and South Africa, that kept us going. Resolution was finally rewarded, and on the day the Congress began we had a capacity number of delegates and we turned away many speakers, for we had too many.

These were some of the thoughts passing through my mind as Laurens van der Post and I sat facing the crowd. As is customary in our friendship and in keeping with the way we have given public lectures
together, I spoke first. In all the years I have known Sir Laurens I had always referred to him as Colonel. That evening I called him Laurens. Our friendship had deepened as a result of the problems and travails of this 3rd World Wilderness Congress. His wisdom, kindness, humility and great inner strength had been a source of help in all our labours. I was very proud to be sitting with him and to be called his friend.

Vance had asked us to speak on ‘Wilderness: Trail to the Future’. I was reminded of the mpafa tree (Ziziphus mucronata) with its most characteristic thorn: one points forward and the other is hooked. It illustrates a fundamental principle of Zulu philosophy. We are always thrusting forward while also being hooked into the past.

So I began by telling how the idea of the world wilderness congress had been born in the Umfolozi game reserve in Zululand, during the long wilderness treks along the banks of the White and the Black Umfolozi rivers and into the hills with their lovely poetic Zulu names of Dengezi—Place of Broken Pots, Monfu—Pouting Rocks, and Mpila—Hill of Good Health, because it rises to a high point from the hot plains. My guide, companion and mentor was an old Zulu, Magqubu Ntombela. He was born and brought up here and served all the Zululand game conservators. We would camp near the rivers and cook impala meat on long green sticks next to the fire. With a dusting of coarse salt, a dash of black pepper and a handful of stiff maize meal, it made a good meal. Tea or coffee was then boiled on the red embers of the fire, which reflected against the giant sycamore fig trees. We lay on the sand and he told me stories of the old Zulu heroes, his voice reverberating down river. Out beyond the fire the jackal were yipping and screaming as they followed a pack of hunting hyena. We heard the nightjar call, the grass owl hiss and the cries of bushbabies from the high tops of acacia robusta trees. It was in such a setting that the earliest of our human ancestors lived. The pattern of the land and the sounds of Africa were deeply imprinted on their evolving brains, so it can probably be said that the original memory of wilderness was in Africa.

I told Magqubu my plans for sharing this wild African Eden with people who would be prepared to walk here and experience it as we were doing. He understood what I wanted to do and we took out Natal Parks Board trails in the Umfolozi game reserve for many years. Later I founded the Wilderness Leadership School and we trekked with people from all over the world into the wilderness of Umfolozi. At the end of a trail we had our small indabas (gatherings) and from this came the idea of the big indaba for those who had experienced wilderness in other parts of the earth and who wanted to share their knowledge. This led to the 1st World Wilderness Congress in South Africa, the 2nd in Australia and now here we were in Scotland at the 3rd.

Sitting amongst the audience in this Findhorn Hall which had been
built with much loving care were two close friends of mine, Hugh Dent and Paul Dutton. We had worked together in Zululand 28 years ago at a time when game rangers were not only extremely poorly paid but were shunned by society, for only a handful of people appreciated the game reserves. Both are men of great personal courage and for years they had faced the antipathy of local farmers and public officials who would not understand the importance of the conservation of natural resources.

Hugh and Paul were nourished, as I had been, by the wilderness of the game reserves they worked in—Umfolozi, Lake St Lucia, and Ndumu. The wilderness concept as defined in the American Act had gripped their imagination too and they were on fire about it. The audience listened as I told stories of Hugh Dent canoeing on moonlit nights, gliding past hippo herds that sheltered in small bays and alongside giant Nile crocodiles that were chasing shoals of mullet in the shallows. This was the closest that anyone could get to African wilderness. It made its impact on Hugh and he became another protagonist of wilderness.

Paul Dutton and I first met competing against each other on the 110 mile canoe race from Pietermaritzburg to Durban down the Umsindusi-Umgeni rivers. Paul had been stationed on Lake St Lucia in 1957 and canoed its vast expanses. He had an intense love for the Lake and its wildlife and an intimate knowledge of the hippo, crocodiles and water birds. We all served the Natal Parks Board and fought to have wilderness areas set aside within the game reserves.

T.E. Lawrence (Lawrence of Arabia) says in his book, Seven Pillars of Wisdom, that some 40,000 prophets left the city and went out into the wilderness, had their visions then returned to the city to try to spread their message to their doubting associates. We were like those prophets, but in our world the wilderness had shrunk to tiny pitiful remnants, mere witness areas of the once huge wild landscape of southern Africa. We watched the deterioration of the wild lands as more roads were built, villages grew and a mass of tourists visited the parks. It was only where people were made to walk, or ride a horse, or canoe that the landscape did not feel the human population explosion.

In the 1970s Paul Dutton went to Moçambique and stayed there when the communist Frelimo government took over from the Portuguese. After ten years of loyal service Paul was arrested. It was a displacement action of Frelimo in retaliation for a raid by South African forces into Moçambique. Paul had committed no crime and no charges were laid; he was simply the victim of politics.

I will always remember him telling me how wildlife had come to his rescue. In his prison cell in the feared high security Machava prison there was a tiny slit in the wall and he could see the sky. He was able to identify 80 different species of birds. There were spiders in the cell and
he spent hours watching the way they spun their webs and caught passing insects.

He was in solitary confinement. The lack of contact with people was a terrible strain. He used to think up ways to keep his gaolers in conversation. This was only possible when he was sweeping his cell or receiving his plate of maize meal. He had a small tube of toothpaste which he mixed with his pipe tobacco and used it to paint animals and birds on the walls. Each day his gaolers would stop to look at what he had done and point to an animal they knew from their particular tribal area in Moçambique. This gave him the chance to talk to them and they became very interested in the stories of his adventures in wild country with rhino, elephant and lion.

I had been away working on the tamaraw project in the Philippine Islands and returned to hear that Paul was incarcerated in this dreadful prison. No one had publicised it for fear of antagonising the Frelimo authorities. I knew this was the wrong decision and contacted Laurens who immediately took action. Laurens had been a prisoner in Java under the Japanese and he knew what solitary confinement meant. He contacted the British Ambassador in Pretoria, Sir John Leahy, and I was introduced to him and explained the position and Paul's innocence. Sir John promised help. We cabled Ray Arnett in Washington and other friends in New York and Switzerland.

Paul was eventually released and chose to stay in Moçambique to complete his contract. He later attended a reception at the Palace of President Samora Machel. The President was impressed with him and wanted him to stay in Moçambique. When Paul left, he had forgiven his captors and praised Samora Machel for his interest in conservation. Paul's life had been saved by wildlife and his belief in wilderness. He came to the 3rd World Wilderness Congress not only to be present at the proceedings but also to meet Laurens and to thank him personally.

The wilderness has made it possible to have these friendships and I knew there were people in the audience who had made new friends and renewed old friendships. This is one of the functions of the world wilderness congress and this particular one in the Highlands of Scotland, with the wild heather and snow-clad hills, had woven a special magic, and on this last night I doubted if anyone would ever forget the experience.

What of the trail to the future? Wilderness has become one of the most precious resources on our planet. Only a few countries give it legal protection. It is the task of everyone who knows the power of wilderness to fight for its retention and to persuade all governments of its importance to humanity.

The world wilderness congresses in their own way have become trails into the wilderness of the mind based upon the profound experience of scientists, politicians, artists, writers and poets. Those
people attending know that the congresses are evidence of the quickening pulse of our concern for the world in which we live. They know too that it is not only the scientific factual warnings of unparalleled disasters facing us that will save our species. It requires the ancient knowledge of tribal people, the emotion of art, poetry and literature, religion and the practical guidance of those who have been through the fire of politics. The environment needs a holistic approach in the widest sense of the word.

The principal strength of wilderness is that it is impartial to short-term benefit, or to imbalanced or egocentric thinking. The wisdom in wilderness is long-term and evolutionary. Therefore increasingly in the minds of people, especially those who are concerned with a balanced future for themselves and their children, wilderness has become a symbol of environmental quality. I have personally led a thousand people of many races, nations and creeds on the trails in the Umfolozi game reserve and Lake St Lucia with the Wilderness Leadership School. These wilderness participants have a deep personal experience which affects the way in which they make decisions and view their future. There are many who echo the same phrase: “This experience changed my life.”

Many challenges stand between ourselves and the true understanding of what it means to live in harmony with our environment. Perhaps the greatest of these challenges is to overcome the persistent sense of ineffectiveness and the visions of doom in the human psyche. Here we need to urge the psychologists to look deeper into the human mind and to find answers to the paradox of people as wilful and destructive beings and people as loving and concerned beings. The reconciliation of these opposites is our most urgent quest. Carl Gustav Jung knew and understood this, and continually voiced it. It is my personal conviction that wilderness in all its definitions is a key to resolving this paradox. Above all we must never overlook the spiritual impact of wilderness.

The trail to the future lies in the hands of all of us who have experienced wilderness. It must be our task to make the wilderness a moveable feast and bring it into the cities through the mind of human beings.

Perhaps there is a moral in Paul Dutton’s experience. We are all in a kind of prison and daily need to take note of what lies through the slit in the prison wall. All about us is the natural world and even in the most densely populated cities there is the sight of a bird or an insect, something to remind us of other life.

Thoreau’s famous statement, which has been repeated countless times, contains an inescapable truth. He said, “In wilderness lies the preservation of mankind.”
The bush....
the night
moves through the bush
the bird
calls through the bush
the byena
laughs through the bush
the man
thinks through the bush
the lion
coughs through the bush
sound scatters—
seeps through the bush;
intoxicates the weary mind
weeps through the soul
of days gone by
of days to come.
The soft cocoon
the sharp reality
light softly calls in the east,
and the day bursts through
the bush
always the bush.
God secure me from security,
now and forever,
Amen.

Jonathan Bailey
Summaries of Talks
Not Included in This Book
and
Additional Material on the
3rd World Wilderness Congress
at Inverness and Findhorn,
Scotland.
Under the Pole Star.
*Hans Anderson*

The lands under the Pole Star in the most northerly part of the European land mass are filled with variety—from towering mountain ranges to mighty rivers, from the luscious green of larch woods in summer to the cracked ground where the permafrost rules, from forest tundra to stunted scrubland, and from virgin spruce forests filled with ancient 500 year old pines to ocean shores scattered with trees and driftwood torn loose by violent spring floods and the breaking up of the winter ice. These areas are home to a wide variety of bird and animal life, increasingly threatened by the inroads of industrial civilisation.

The land is filled with ancient trails that can be covered only on foot, on skis or by reindeer sled. But this is not a wilderness devoid of humans, for signs can be found of a long-dead people and their dwellings, and of more recent inhabitants. Nomads continue to tread the ancient trails leading from summer to winter. The people known as the Lapps live in four nations—Norway, Sweden, Finland and the Soviet Union. The Lapps protect and preserve the ancient traditions, showing respect for the spirits and the sacred places. They are dependent on the reindeer for their survival, and their word for these animals means life.

Even today, the gentle rhythm of the old world still continues in these remote places, but the continuation of this idyllic lifestyle is not necessarily guaranteed. The search for oil and gas is in full swing and much of the tumbling living water is now constrained by dams and tamed to serve human needs. The mountains and soil are raped of their riches.

There was a time when these resources seemed endless and from that misconception we planned and overdeveloped the factories and industrial complexes that demanded and devoured more and more. Even the remotest wilderness forests are now under threat. However, large areas of undisturbed land still remain, and it is imperative that we all make a concerted effort to influence politicians and those in positions of power to work out and implement a policy of protection for our waters, mountains and forests, for the sake of the animals, birds and fish, and for the coming generations of humankind.

The New Zealand Experience.
*Eric Bennett*

New Zealand evolved in isolation over millions of years, with no herbivorous or predatory mammals. Its forests, especially lowland ones, are unique and of crucial international importance in the study of stable and self-perpetuating ecosystems. When the first Polynesians arrived,
about 80% of the land was covered in forest and 70% still was when the first European settlers arrived in 1840. Today native forest covers only 22% of the land. Some 11 million ha have been cleared and other types of wilderness have also been modified. This and the introduction of herbivorous and carnivorous animals has led to the extinction of many of the life forms that once characterised NZ. Nearly a quarter of the world’s endangered species are confined to this country.

NZ’s present system of nature reserves does not fully represent the range of areas which should be protected. The Biological Resources Centre has now set up an ecologically-based framework of 286 natural areas against which the adequacy of the existing system can be assessed.

The NZ national parks system originated in 1887 when Maori chiefs gifted sacred land as a national park. NZ now has ten national parks, with two others proposed. The existing parks were selected under criteria emphasising wild scenery, so a strategy to achieve a better representation of biota and ecosystems is urgent. There is also a State Forests System and a Reserves System.

Wilderness has been a preoccupation of the Federated Mountain Clubs of New Zealand. In 1977 FMC, concerned about the confusing standards developing under the different management systems, publicly promoted the concept of a Wilderness Commission of private individuals who would set policy and coordinate management. In 1980 the Dept of Lands and Survey, the Forest Service and the National Parks Authority published their Joint Wilderness Policy.

However, little progress has been made in the formal establishment of wilderness areas outside national parks. In 1981 a Wilderness Advisory group was set up as a result of FMC’s first New Zealand Wilderness Conference, to advise government on potential wilderness areas. Their first task was formulating a draft wilderness policy (which has since been formally adopted by the NZ government). This policy proposed a minimum of 20,000 ha for wilderness areas, with suitably large or difficult-to-traverse buffer zones, and laid down specifications concerning developments and activities in these zones.

Ten large wilderness areas have been proposed by FMC. They are the last chance to provide a wilderness opportunity for future generations and would provide an enviable national wilderness system. Some areas are under threat, hence there is urgency to establish reserve status. In March 1983, the Minister of Forests gave approval in principle to the Raukumara wilderness area and noted a ‘definite demand’ for wilderness areas which the government would attempt to cater for in future.

NZ’s early European settlers saw the forest wilderness as something to be tamed. Now New Zealanders are beginning to see wilderness as a wonderful asset. The NZ nature heritage is quite distinct as a result of its isolated evolution. In the face of today’s idolatrous commitment to
material growth, we should take pride in deciding consciously to forgo development and to leave some places forever unspoiled as a symbol of the value of nature and of life in its own right.

Look Up—The Sky's the Limit.
Eleanor Franey

The sky has set the stage for an intellectual adventure in a learning programme begun in 1982 for third-graders at the Thompson School in Arlington, Massachusetts. The ever-changing beauty of the sky has captivated the children's imagination, prompted curiosity and stimulated the pursuit of knowledge, as well as providing me, the teacher, with a fresh outlook, approach and enthusiasm for teaching.

It begins with looking up and becoming aware. The sky is always there; you don't have to go anywhere to get to it, and it's free. It is something we can all experience and relate to at any time as long as we see it. After the students turn to the sky, it's simple. They begin wondering about and questioning everything in their environment. They practise writing skills by composing and sending letters to all sorts of people with requests, suggestions and thanks. For example, letters were sent to weather-people at TV and radio stations suggesting they mention the beauty of the sky in their reporting. The students read sky poetry continually. This has developed vocabulary and reading skills, and also gives confidence to slower readers. They keep sky journals, in which they explore astronomy, weather, the seasons, night and day, the solar system, legends, folktales, mapping skills, plant growth and so forth.

The library has become a very popular place. The students develop critical thinking skills, spelling and vocabulary, as well as sharing creative stories and research and developing oral communication skills and confidence. Art activities provide a strong thread of visual stimulation and exploration. Significantly, these children become zealously turned on to all environmental concerns, but only after they become enthralled by the wondrous beauty of the sky.

The Alaskan Wilderness.
Glenn T. Gray

Alaska's 1.5 million sq km represent some of North America's most spectacular wilderness. Towering mountain ranges contrast radically with vast areas of flat tundra and taiga (northern boreal forest). Alaska is the largest of the United States, with the smallest population—only 400,000 people. It is a land of extremes. Temperatures range from
30°C to -26°C. The coastal rain forest receives up to 635 cm of precipitation each year, while the arctic tundra is desert-like in comparison. Glaciers up to 2201 sq km large flow from even larger icefields, slowly gouging out mountainsides. Active volcanoes erupt periodically and earthquakes are not uncommon. In the interior taiga, wildfires regularly alter the landscape.

Alaska’s relatively unspoiled fish and wildlife habitat supports a wide variety of species. Musk oxen, caribou, moose, wolves, wolverines and three kinds of bear roam the land. The waters provide a home for endangered species of whales as well as sea lions, walruses and a wide variety of fish. Alaskans are almost as diverse, ranging from those living a subsistence lifestyle in the bush to the more conventional urban dwellers. The native people encompass three distinct groups: Eskimos, Aleuts and American Indians.

Over 56 million ha of Alaska are included in various state and federal protective designations, with more than 22 million ha of these managed as wilderness and preserved from development. Their preservation has involved a long and strenuous struggle.

During the 1970’s, the future of Alaska’s federally managed land was being shaped by many opposing forces. Conservationists united in an effort to protect Alaska’s wild lands from possible ecological degradation due to oil development. Aboriginal land claims delayed completion of the trans-Alaska pipe-line. Making things more complex, the state was in the process of selecting some of the 42 million ha as authorised by the Alaska Statehood Act. In 1971, the Alaska Native Claims Settlement Act (ANCSA) awarded the indigenous people one billion dollars and 18 million ha of land. This legislation ignited a controversy that ultimately divided Alaska physically and emotionally. Section 17(d)(2) of ANCSA gave the Secretary of the Interior authority to withdraw up to 32 million ha for study as possible inclusion in the national forest, park, wildlife refuge and wild and scenic river systems. The land was protected until December 1978, presumably allowing enough time for Congress formally to designate the land. However, the process evolved into a long and heated debate involving developers and preservationists from all over the country. Finally a compromise was reached and on December 2, 1980, President Carter signed the Alaska National Interest Lands Conservation Act into law.

More than one third of Alaska has been included in some kind of protective designation. But there is no guarantee that these lands will continue to be preserved in the future. Conflicts between wilderness use and land development can be expected to escalate. The degree of consideration given to conservation will depend on the attitude of people in Alaska in coming years. Environmental and political education for youths may be one answer. Understanding land use problems
and politics will enable future Alaskans to participate actively in environmental planning and legislative processes, influencing management decisions on both private and public lands.

Environmental Law:
Recent Developments in South Africa.
P.D. Glavovic

In most systems, law is traditionally regarded as the servant of society and not its master. Laws are passed or evolve relative to society's needs, but they tend to lag behind those needs. At this time there is little doubt of the need for specific legislative adoption of a legal conservation ethic. This should not be by way of a general policy statement, but enacted as a matter of law. There is no reason why precise and unequivocal provisions should not be enacted, for example, for the interpretation of statutes and subordinate legislation, and for judicial review of administrative actions, on the basis of a declared conservation ethic.

In South Africa, common law affords inadequate environmental and wildlife protection. The time is clearly ripe for re-introduction, in some form, of the actio popularis (public interest) of Roman Law, to complement the current bias of individual rights.

In relation to developments in other countries, a clear statement of national policy has taken a long time to emerge in South Africa. There are a multitude of laws touching upon environmental matters, contained in numerous acts of parliament and ministerial regulations, provincial ordinances and municipal by-laws. Whilst it would be neither practical nor desirable to attempt to consolidate all environmental laws into one all-embracing statute, some degree of rationalisation is clearly desirable.

In 1980, the then Department of Water Affairs, Forestry and Environmental Conservation published a White Paper on a National Policy Regarding Environmental Conservation. In consequence, a Select Committee of the House of Assembly was appointed to enquire into and report on the subject of the Environment Conservation Bill, with power to take evidence. In February 1982, the Commission adopted the recommendations of the White Paper and drafted the Bill which became law in July 1982.

The main purpose of the Act, as stated in its long title, is 'To make provision for the coordination of all actions directed at or liable to have an influence on the environment.' This general statement of intention does not have the force of law. South Africa could benefit from the experience of other countries, and the Act should be amended so as unequivocally to establish a conservation ethic as a substantive rule of
interpretation for our courts in respect of all laws affecting the environment.

The way in which the Act seeks to achieve its declared purpose is by the establishment of a Council for the Environment, which is purely advisory. While it serves the very useful function of an environmental watchdog, it has no teeth. It does not have any power of enforcement.

The Act gives the Minister wide-ranging powers to make law by regulations affecting matters of particular concern to conservationists, and there are recurring references to the advisory capacities of the Council and management committees. This form of legislation concentrates too much power in the hands of bureaucrats, while the usual checks and balances of parliamentary debate and publicity prior to promulgation are lacking. The South African common law is inadequate and, in its present form, so is the Environment Conservation Act. Further legislation is necessary.

Wilderness Politics, Public Participation, and Values.
Daniel H. Henning

The survival, quantity and quality of wilderness everywhere will be basically determined by political and governmental processes. Yet these processes tend to avoid value exposure and emphasis. Governmental approaches toward wilderness and environmental affairs tend to hinge around economic development, techno-scientific, factual and statistical considerations, while underlying and basic values are often not brought to the forefront but disguised under an ‘objective’ and ‘professional’ image. This avoids basic conflicts and threats to alliances and compromises, but has negative consequences for wilderness. Under this orientation, public participation loses a great deal of opportunity to influence decision-making.

Wilderness values are unique, complex and intangible, generally non-economic and long-term, while opposing non-wilderness values are more concrete and quantifiable, emphasising economic and short-term considerations. Non-wilderness value positions are consequently more oriented toward government approaches in public participation. Ironically, both non-wilderness and wilderness interests may follow these approaches in their public participation efforts in order to fit into the established governmental system. This results in the exclusion of important and needed values underlying the various interests and positions. By not articulating and involving wilderness values more, the public often misses opportunities for affecting far-reaching wilderness decisions. Wilderness values need to be more explicitly as well as implicitly stated, and implemented politically.

More study and emphasis needs to be given to wilderness values per
se, which are often complex and difficult to describe and identify. We also need to develop more innovative ways of educating the public on wilderness values in terms of their lives and welfare and of ensuring that their value inputs are effectively incorporated into public participation and political processes. Articulate and powerful public support, through a value emphasis, can do a great deal to determine the survival, quantity and quality of the remaining wilderness on planet Earth.


*Douglas Hey*

A new approach is needed to the entire nature conservation issue. Among the problems which must be debated and resolved are those of human behaviour and human numbers. Despite extensive and intensive conservation education programmes in many countries, poaching, vandalism and the desecration of nature proceeds apace. People are still exploiters rather than stewards of the ‘garden’. In addition, human populations, particularly in the developing countries, are growing at an alarming rate, and if this trend continues many thousands of species and most wilderness areas will disappear. Increasing numbers, together with demands for improved standards of living, put increased pressure on the natural resources. It is essential to compromise and reconcile conservation and development.

We need also to address the question of whether we in the modern world still need nature or whether we can live a full and healthy life in an environment of our own creation. There is also the fascinating issue of whether nature conservation is for the sake of humankind, or whether fauna and flora as part of Creation have a right to exist *per se*.

Wilderness and Dams: Destruction by Insignificant Increments.

*Geoffrey E. Petts*

Reservoirs have attracted considerable attention from conservationists because human-created lakes can inundate vast areas of terrestrial habitat, interrupt important faunal migrations, and destroy the socio-economic basis of indigenous cultures. Dam construction usually involves the provision or improvement of route-ways into remote areas which often encourage agricultural, industrial and recreational developments subsequent to project completion. Yet the impoundment itself can markedly alter the entire river downstream. These changes may take place over a period of tens of years after dam closure. In the short term the effects may be manifested by relatively minor changes to
individual components of the ecosystem but the cumulative long-term effects of these changes may totally alter the characteristics of a river, and are not necessarily only confined to the channel itself.

One striking downstream manifestation of river impoundment is the loss of pulse-stimulated riparian and floodplain habitats. Under natural conditions rivers experience a wide range of discharges during the year, and low-lying land adjacent to the river, often produced by the migration of the river itself, will be regularly inundated. The high primary productivity of these floodplain ecosystems is controlled by the dynamic interaction of the annual flooding and associated sedimentation. The world's rivers once provided vast floodplain ecosystems: the Zambezi, for example, regularly flooded up to 16 km on either side of the channel. Today, major floodplain rivers are rare and many of the pulse-stimulated habitats have been lost because of river impoundment. The fringing floodplains of the Zambezi, Danube, Don and Missouri, for example, have virtually disappeared and the 53,000 sq km floodplain of the Mekong is but one example of a regularly inundated habitat that is currently being altered by dam construction.

It is unfortunate that the conflict which exists between the objectives of river impoundment and the needs of the floodplain ecosystem is so intense. More than 300 large dams are being completed each year, and by the year 2000 it has been estimated that more than 60% of the world's total streamflow will be regulated. Perhaps we have now reached a point when the preservation of a few river systems should be considered seriously, at least until we can gain a fuller understanding of the long-term environmental changes resulting from river impoundment.

The Big Mountain Legal Defence/Offence Committee.  
Laura Kadenehe

Under the guidance of our Creator and upholding the spiritual responsibilities and oral traditions which we recognise as our law, all that we offer this Congress is within the context of our understanding of the urgency to uphold our entire way of life. It is always an honour to participate with a great circle, where hearts and minds unite with power and wisdom to find solutions that will allow us to uphold our spiritual life for a continued future.

Indian people have been faithful to their responsibility to the Earth and all life originating from her, and to the generations of our past and our future, our ancestors and our unborn. In this spirit, our nations unite continuously to discuss the plight of our Indian people and the struggle for survival that is upon us today.

Big Mountain Legal Defence/Offence Committee was established at the request of the traditional Hopi elders of Big Mountain to provide
the people with an independent legal network. The elders wanted lawyers who would recognise their claim to exercise jurisdiction as a sovereign nation and their struggle to rebuild their nation, Big Mountain Dine Independent Nation. Standing up to defend their nation and enforce their jurisdiction, to protest against relocation or to defend their Mother Earth from rape and desecration, often meant encounters and arrest. The elders wanted lawyers who would be sincerely committed to their resistance struggle, literally a struggle for survival against genocidal attack and their forced displacement from their ancestral homeland.

The fact that this legal committee needs to exist highlights the difficulties encountered by Indian people attempting to organise themselves in the southwest. The people themselves survive in very poor living conditions, isolated from world view by dirt roads and no communications systems whatsoever. It is convenient for the Government, who do not recognise the people’s abhorrent situation, that they remain hidden. And it must be recognised that these conditions of under-development are what the people chose, thinking this would allow them to continue with their way of life uninterrupted. As it became apparent that this was not the case, the elders have stepped forward, and one of the difficulties they encountered is profound culture shock. Thus special organising efforts have to be made.

BMLDOC is establishing itself as the central clearing house which national support group networks can plug into. All legal efforts are conducted through the Big Mountain Legal Office. Our office documents legal information, processes litigation, and represents individuals from the Joint Use Area with various legal problems. Our outreach involves speaking on legal, cultural and historical issues, and explaining the need to examine bills on the issue of relocation. We continue to explore ways to stop relocation of the people, and document and expose statistics on the mining conducted on Indian lands by outside concerns. Our minimal resources have meant we have been unable to launch a large-scale campaign of support, but this office is an important symbol and accomplishment to those of us who have been organising out here for so long without one.

Over the last few years, we have realised that the US Government is intensifying its efforts at relocation. We have continued to stand firm, hoping that groups and individuals would slowly jump on the bandwagon to help us stop relocation, fencing and stock reduction. Four years later, however, relocation continues and we are only two years away from the 1986 deadline, waiting to see what measures the Government will resort to in removing those unwilling to cooperate. Our elders continue to go on to the Spirit World before our eyes, pressured with all the effects of relocation, arrests, trials and imprisonment, while they watch their homeland being destroyed.
Progress and Offshoots of the World Campaign for the Biosphere.
Nicholas Polunin

The term 'biosphere' has been variously used by different authorities, but here I use it to denote the envelope involving and surrounding the Earth in which any form of life exists naturally. We human beings, together with some eight million species of plants, animals and microbiota, owe our origins to the biosphere. We are an integral part of it, and are utterly dependent on it. Yet we are increasingly and most gravely threatening it. However, we also have the capacity to save it.

The World Campaign for the Biosphere was declared by concerned environmentalists on Environment Day, 1982, initiating a movement to help the 'person in the street' to be more aware of our absolute dependence on the biosphere. The Summer 1982 issue of Environmental Conservation published the Declaration of the World Campaign for the Biosphere. Recently the World Council for the Biosphere was established. Its main function will be to monitor global conditions from a holistic point of view, and to alert governments, leaders and the public of any widespread tendency or foreseeable change that could be harmful to the biosphere or any major part of it. Concurrently, the International Society for Environmental Education is being established, advising but not directing the many regional, national and local associations for environmental education that have sprung up in recent years. Mention should also be made of the new International Association for Research on Impounded Rivers, dealing with one of the ways people have done most to alter the face of our planet.

The Imperative of Nuclear Disarmament.
Mostafa K. Tolba, Arthur H. Westing, Nicholas Polunin

Nuclear weapons have the deadly capacity to destroy the life-giving systems on which we all depend. Plants, animals, and their habitats both terrestrial and aquatic can be utterly devastated by nuclear detonations, of which the existing capability is sufficient practically to destroy our Earth several times over. The peoples of the world face the stark choice of survival or virtual annihilation.

As the world has never experienced a large-scale nuclear war, predictions of possible environmental effects must remain widely conjectural. However, studies of the effects of the Hiroshima and Nagasaki attacks, of numerous test explosions and of other circumstances including natural catastrophes, help to suggest the type of impact and extent of effects of such an event. These effects comprise four main categories which may be treated as follows.
1. **Blast energy.** This comprises half or more of the energy of a nuclear bomb, and its dissipation is responsible for much of the physical damage caused on detonation. A single one-megaton airburst would knock down virtually all trees over about 14,000 ha and force thousands of tonnes of water vapour from the lower to the upper atmosphere; groundburst, it would blast out a huge crater extending over perhaps 12 ha and with a maximum depth of 90m, and thrust some 50,000 tonnes of rock and soil materials into the upper atmosphere as fine dust; burst underwater, it would lift tens of thousands of tonnes of water droplets into the atmosphere.

2. **Heat energy.** Another one-third or more of the energy of a nuclear bomb is dissipated in the form of an intense thermal wave, igniting wildfires over a vast area whose extent depends on the terrain, weather conditions and vegetative cover.

3. **Radiation energy.** The remaining 10% or so of the energy of a nuclear bomb is dissipated in the form of nuclear radiation, of which a portion is released in the initial burst and the remainder, much more slowly and widely, as radioactive fallout.

4. **Synergistic effects.** Among the more disastrous of these would be those that could be set in motion by the large-scale injection of fine particles of dust and droplets of water into the stratosphere, by the addition of vast quantities of smoke to (or generation of smog in) the troposphere, and by introduction of large amounts of oxides of nitrogen into the ozone layer.

There is nothing to do about nuclear war except avoid it (which means also avoiding accidental or other nuclear flare-up). This will require destroying all current capability of waging such war and henceforth monitoring the world against any manufacture of nuclear weapons. It additionally demands a close world-wide monitoring of the civilian nuclear-power industry in order to detect and forestall possible clandestine production of weapon-grade plutonium and thence the manufacturing of nuclear weapons. These avoidances are everybody's imperatives and the more we insist on them, the sooner and more effectively will politicians prevail on governments to conform to them and save people and nature from the threat of annihilation.

**Wilderness under Attack—The Politics of Wilderness Conservation in the United States, 1981-83.**

*William Turnage*

I feel it is most important that James Watt has been forced to resign as Secretary of the Interior of the United States. In my opinion there has never been an anti-environmental organisation like Ronald Reagan's current administration, which has come to office absolutely determined
to dismantle most of the environmental protection legislation enacted over the past century.

It is impossible to overstate the difference between previous administrations, both Republican and Democrat, and this one. Officials in the resource area in the current administration come largely from the industries which their agencies are supposed to regulate. Another fundamental flaw in these appointments is that they are people who do not believe in government and the traditional roles and missions of the agencies which they are running. Historically, people who do not believe in government do not make good governors.

However, we have an incredibly strong and talented conservation movement in the United States. The four major national conservation organisations dealing with wilderness issues are the National Wildlife Federation, the National Audubon Society, the Sierra Club and the Wilderness Society. These organisations employ highly professional staff with, for example, the Wilderness Society having more registered lobbyists than any other organisation in the nation’s capital. Each group focuses a lot of attention on legislation, but also works at a grass-roots level through their membership or local chapters.

The United States has what is probably the largest pure wilderness system in the world, composed of 80 million beautiful acres. In the next six years final decisions will be made about another 63 million acres of wild, roadless land. It could be the last big apportionment of land in our history, and it is a crucial one. The nature of the administration and people in office are critical—there won’t be another chance.

**Will-of-the-Land:**
**Wilderness Among Early Indo-Europeans.**
*Jay H. Vest*

The ancient Celts, a sub-group of the Indo-European race, worshipped nature: for them it was alive with the same creative force humans share. Their conception of *Will Power* or *will-force* was extended wholly to nature—even solid earth. This notion of ‘will’ is akin in origin to the term ‘wild’. Nash tells us that ‘wilderness’ means ‘wild-deór-ness’—the place of wild beasts, the root probably being ‘will’, meaning self-willed or uncontrollable, from which came the adjective ‘wild’. ‘Wild-deór’ denotes creatures not under the control of humans. ‘Ness’ in Middle English was apparently retained only in place names. Nash maintains that ‘ness’ suggests a quality producing a certain mood in an individual who assigns it to a specific place. However, considering the Middle English application of ‘ness’ to place names, it may well have been combined with ‘wild’ in an entirely
different sense from that Nash suggests, meaning ‘willed-land’. If the ‘der’ of wilderness represents ‘of the’, then in ‘wilderness’ there is ‘will-of-the-land’ and in ‘wild-deor’ there is ‘will of the animal’. The primal people of northern Europe were not bent on dominating all environments and the ‘will-of-the-land’ concept demonstrates a recognition of the land for itself.

Indo-European nature worship evidences a tradition of sacred places—wilderness in the deepest sense, imbued with will-force and spirit. Although most contemporary scholarship implies that only modern cultures can appreciate such wilderness, there is a reverence for ‘wild’ nature that predates the homocentric mediaeval/renaissance world view. With Roman Christianity an imperialism emerged where the wild took on connotations of a desolate waste filled with demons, and the primal Indo-Europeans, in failing to acknowledge the God of the Bible, were defined as barbarous. Nature and nature worship were consequently perceived as evil. ‘Heathen’ means ‘dweller on the heath’, and ‘pagan’ originally meant ‘a rural or rustic person’. As Christianity became the religion of the towns, the rural people who retained the ancient deities became known as ‘pagan heathens’. They worshipped on the heath or in the grove—that is, in the wilderness.

Among ancient Indo-European cultures are many examples of wild sanctuaries. The Celts held sacred certain groves known as nemetons—related to the Breton nemu, ‘the heavens’—reflecting the Celtic belief that the real and the surreal were two facets of a whole. The sacred grove continued in its wild—willed or uncontrollable—condition, and thus the will-of-the-place, its spirit, manifested itself. Such groves were the site of worship, particularly on earth festival days. When these festivals were discontinued, usually because of imperial compulsion, the primal culture disintegrated.

In these sacred groves the Druids, the spiritual leaders of the Celts, developed their lore, wisdom and ecological ethics, glimmerings of which can be gleaned from Arthurian legend. The archetypal Druid, Merlin, explains to Arthur what it means to be king: “You will be the land and the land will be you; if you fail, the land will perish, as you thrive, the land will blossom.” Kinship with the land and its continued health are central themes of the Celtic world view.
One Man’s Wilderness
Heinz Steinmann

‘Cape York Rainforest’—painting by Heinz Steinmann
The Congress was opened to the sound of Scottish bagpipes.

The World Wilderness Congress is a project of the International Wilderness Leadership Foundation, and is a platform designed to promote the international exchange of conservation experience. Centred around wilderness as a symbol of environmental purity, the Congress allows scientists, developers, artists, traditional peoples, politicians, hikers and hunters to meet and share perspectives in order to:

- further worldwide understanding of the need for and meaning of wilderness areas
- enable the general public to understand that industrial, agricultural and commercial growth must go hand in hand with the preservation of wild and natural areas
- formulate plans of action to assure that specific natural areas be established and properly managed as wilderness areas, to be held in trust for future generations.

The 4th World Wilderness Congress will convene in Colorado in 1987. The Secretariat can be contacted at the Department of Forestry and Natural Resources, Colorado State University, Fort Collins, Colorado, USA.

Resolutions from the 3rd Congress, as well as the full text of the papers presented, are also available from the Congress Secretariat at the above address.
Col. Sir Laurens van der Post

Panel discussion: Ian Player, Sally Ranney, Hans Anderson, Laura Kadenebe, Ramakrishnan Palat, Laurens van der Post, Adam Watson
The opening weekend was held at the Eden Court Theatre, Inverness

Hon. Barry Cohen, Minister of State, Home Affairs and Environment, Australia
Carolyn Tawangyawma and Laura Kadenebe of the Hopi nation with children from Treverton School, South Africa

Karen Blair
The stained glass window in the front foyer of the Universal Hall of the Findhorn Foundation was completed just before the Congress, and was an attractive addition to the display of artwork.

The art exhibition at the Congress included work by more than 40 artists and craftspeople of regional and international distinction, and featured painting, sculpture, photography, engraving, printing and weaving.
Contributors to the 3rd World Wilderness Congress

Hans Anderson. Writer, Sweden
G. Ray Arnett. Assistant Secretary of the Interior, USA
Bill Bainbridge. Regional Director, Department of Environment Affairs, Republic of South Africa
Dr. Jean Balfour. Former Chairman, Countryside Commission for Scotland, UK
Very Rev. Prof. Robin Barbour. University of Aberdeen; Former Moderator of the General Assembly, Church of Scotland, UK
Felipe Benavides, O.B.E. President, PRODENA, Peru
Eric Bennett. Conservationist, New Zealand
Karen J. Blair. The Duke of Edinburgh Award Scheme, UK
The Hon. John R. Block. Secretary of Agriculture, USA
Dr. Morton Boyd. Director, Nature Conservancy Council, Scotland, UK
Michael Brown. Human Resources Consultant, USA
Ian Campbell. Gardener, musician, UK
Sheldon Campbell. President, Zoological Society of San Diego, USA
Hon. Barry Cohen. Minister of State, Home Affairs and Environment, Australia
Robert Cowan. Chairman, Highlands & Islands Development Board, UK
Gerald B. Dix. Lever Professor, Department of Civic Design, University of Liverpool, UK
Anthony Fairclough. Director for the Environment, European Commission, Belgium
Eleanor Franey. Spacious Skies Learning Program, USA
Bernard Gilchrist. Chief Executive, Scottish Wildlife Trust, UK
Peter D. Glavovic. Howard College School of Law, University of Natal, Republic of South Africa
Alan Grainger. Author, editor; Commonwealth Forestry Institute, UK
Glenn Gray. Formerly of US Forest Service, USA
Dr. John Hendee. Department of Agriculture, Forest Service, USA
Prof. Daniel H. Henning. Eastern Montana College, USA
Dr. Douglas Hey. SA Nature Foundation, Republic of South Africa
Laura Kadenehe. Big Mountain Legal Defense/Offense Committee, USA
Larkin. Wind Sung Sounds, USA
Sir John Lister-Kaye, Bt. Aigas Field Centre, UK
Theodora Litsios. Photographer, USA
José Lutzenberger. Founder Director, AGAPAN, Brazil
Dorothy Maclean. Author, lecturer, Lorian Association, Canada
Ian MacPhail, F.I.P.R. European Coordinator, International Fund for Animal Welfare, UK
Finlay MacRae. Forestry Commission, UK
Verne McLaren. Trustee, World Wildlife Fund, Australia
Prof. Dr. C.A. Meier. Emeritus Professor Psychology, Federal University, Switzerland
William Moffett. Vice President, Gulf Oil Corporation, USA
Lambert Munro. Chairman, Findhorn and Kinloss Community Council, UK
Prof. Ramakrishnan Palat. Ornithologist, Kerala, India
George Petrides. Michigan State University; The Wildlife Society, USA
Dr. Geoffrey Petts. Loughborough University of Technology, UK
Robert Pickering. Minister of Parks and Renewable Resources, Canada
Ian Player. Founder, Vice-Chairman, Wilderness Leadership School, Republic of South Africa
Prof. Nicholas Polunin. President, Foundation for Environmental Conservation, Switzerland
Roger Pope. Gulf Oil (UK) Ltd, UK
Col. Sir Laurens van der Post. Author, explorer, conservationist, UK
Joan Price. Cultural Liaison to Traditional Hopi, USA
Sally A. Ranney. President, American Wilderness Alliance, USA
Don Richards. Treverton School, Republic of South Africa
William Pitt Root. Writer, poet, University of Montana, USA
Vincent Serventy. Trustee, World Wildlife Fund, Australia
Dr. Hance D. Smith. University of Wales, Institute of Science and Technology, UK
Heinz Steinmann. Artist; President, Cape York Conservation Council, Australia
Rev. Dr. Gordon Strachan. Church of Scotland, UK
Carolyn Tawangyawma. Hotevilla Independent Nation, USA
Harry L. Tennison. Game Conservation International, USA
Mostafa K. Tolba. Executive Director, UNEP, Kenya
Sir George Trevelyan. Founder Director, Wrekin Trust, UK
William A. Turnage. Chief Executive, The Wilderness Society, USA
Jay H. Vest. University of Montana, USA
Dr. Adam Watson. Institute of Terrestrial Ecology, UK
R. Drennan Watson. N.E. Mountain Trust, UK
Prof. Arthur H. Westing. Senior Research Fellow, Stockholm International Peace Research Institute, Sweden
The Hon. George Younger. Secretary of State for Scotland, UK
Franco Zunino. Italian Wilderness Society, Italy

Chairing Sessions

Roger Collis, Lorian Association, USA
Bernard Gilchrist, Scottish Wildlife Trust, UK
Sir John Lister-Kaye, Bt. Aigas Field Centre, UK
Finlay MacRae, Forestry Commission, UK
Verne McLaren, World Wildlife Fund, Australia
George Petrides, The Wildlife Society, USA
Robert Pickering, Minister of Parks and Renewable Resources, Saskatchewan, Canada
Ian Player, Wilderness Leadership School, RSA
Vincent Servently, World Wildlife Fund, Australia

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The Earl and Countess Cawdor
Sir William Gordon Cumming
Major Nigel Graham and the RSPB
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Elinore Detiger
Ray V. Collier (NCC)
Michael and Gail Shaw
Simon and Sarah Fraser
John Busby
A.D. Barton
Angus and Abbie Marland
Moray Mackintosh
Ann Player
Kate Martin

Many other kind people, too numerous to mention, have also given freely of their time on behalf of wilderness and Wilderness '83.
World Wilderness Congress
International Committee

G. Ray Arnett, USA, Department of Interior, Assistant Secretary for Fish, Wildlife and Parks

Dr. Felipe Benavides, OBE, Peru, President PRODENA; former Trustee, World Wildlife Fund

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Professor George Petrides, USA, Michigan State University

Ian Player, RSA, (Honorary Chief Executive Officer) Founder of Wilderness Leadership School, Chairman of 1st World Wilderness Congress

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Harry L. Tennison, USA, President, Game Conservation International

Captain Percy Trezise, Australia, Author, Anthropologist

Stewart Udall, USA, Former Secretary of the Interior

Col. Sir Laurens van der Post, UK, Author, Explorer

R.W. Whitely, RSA, Businessman, Provincial Councillor

Professor Scott C. Whitney, USA, Professor of Law, College of William and Mary
The Findhorn Foundation

The Findhorn Foundation, which hosted the 3rd World Wilderness Congress, is an international spiritual and educational community in the north of Scotland. It was founded in 1962 by Peter and Eileen Caddy and Dorothy Maclean on a caravan park a mile from the fishing village of Findhorn, from which it takes its name. The community now consists of some 200 permanent members, and thousands of guests visit each year to take part both in the educational programmes and in the working life of the community.

The Foundation has no formal doctrine or creed. It is based on the idea that humanity is involved in an evolutionary expansion of consciousness which will, in turn, create new patterns of civilisation and promote a planetary culture infused with spiritual values.

In addition to its regular educational programmes, the Foundation also hosts arts festivals and international conferences several times a year. The 3rd World Wilderness Congress was the first outside conference to be hosted by the Foundation. The completion of the Universal Hall now allows the community to expand its work by offering full conference facilities to groups and organisations who seek to give their own expression to the development of a positive future.

For more information, write to the Findhorn Foundation, The Park, Findhorn IV36 0TZ, Scotland.
The Findhorn Village

The centuries-old village of Findhorn is situated at the mouth of the Findhorn River and on the edge of the Findhorn Bay, in a beautiful and tranquil setting which added much to the *ambience* of the 3rd World Wilderness Congress. As a token of appreciation for the hospitality shown to the Congress by the residents of the Findhorn village, the International Wilderness Leadership Foundation has given the village a grant to enable an educational cairn to be erected which explains the significance of the sand-dune system on the Moray coast.
Natural wilderness is a factor for world stability – an active agent in maintaining a habitable world.

Sir Frank Fraser Darling

WILDERNESS The Way Ahead

Edited by Vance Martin and Mary Inglis

Why is wilderness such an important issue today? What responsibilities do we have to our environment? How can we balance the needs of individuals, society and the Earth itself in order to assure that wild places will remain a functioning and valuable part of our planet? WILDERNESS '83, the 3rd World Wilderness Congress, convened in Scotland in 1983 to discuss these and many more questions. This book presents the edited proceedings of this Congress in an informative and readable style. The wilderness issue is explored in depth by a multi-disciplined gathering of scientists, artists, politicians, industrialists, tribal people, psychologists and philosophers. Contributors include Sir Laurens van der Post, Ian Player, Jose Lutzenberger, Felipe Benavides, Prof. C.A. Meier, Carolyn Tawangyawma, Dr. Morton Boyd, Dr John Hendee and the Hon. Barry Cohen. Eight pages of colour and more than 80 black and white photographs complement the text.

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