



OCCASIONAL PAPER NO. 6

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Plenary Talk to the 8th Annual Meeting of the Canadian Council
on Ecological Areas, 1989

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To begin, I want to make things clear. First, nothing I am about to say is necessarily endorsed by the CCEA. And now that I have your attention, I will explain. Those who have worked with me will know that I often say things simply to be provocative. Give me the floor with a topic like this, and I hope to leave the entrenched wondering and the flexible thinking.

Second, this will not be a scholarly synthesis of world publications. Instead -- and in the other extreme -- I will use my own experiences. Everything comes from my personal encounters -- or from my exchanges with past colleagues, in offices, on mountain tops, or over beer.

Third, when I drag out old skeletons, they are as **illustrations** of where I saw needs for improvement. And I feel sure that every one of my skeletons will look familiar to more than one person in this audience. Not much has changed in the **kinds** of protection problems over the past two or three decades; but their **intensity** has changed dramatically as distances shrink and people multiply.

My **reason** for standing here is my hope that you will try harder than my colleagues and I did, and be cleverer than we were, at improving protection in our natural areas. My conviction is that these wild places are obviously the most valuable things in this solar system.

And having opened that personal door, it seems necessary to give you a briefest glimpse of my credentials for the job. My protective beginnings went public near age 13 with a letter in the *Globe and Mail* on the protection of birds. This proud success was high on emotion and very low on everything else. Later, education included four years finding out that most foresters knew surprisingly little about forests, then four more finding that many biologists did know a great deal about plants and animals.

Work experience, which was even more educational, was in four phases: research biologist in British Columbia parks; interpreter in the same parks; interpreter of federal Wildlife Areas; and director of a large museum. The museum experience had some quite surprising dimensions, one relevant here being the national spread of a truly remarkable protection ethic for the heritage collections in this nation's museums.

So much for preliminaries. Being old-fashioned, I start with the bible -- in the first book of Leopold, called Sand County Almanac. (if you haven't memorized at least a few words in this book, you are not a true believer.) Here the writer suggests that the ultimate insight comes from "thinking like a mountain".

Unfortunately, most decision-makers among us spend most time thinking about profits, or about ballot boxes, while the rest of us working for them in the field think like bulldozers. Recent studies of newspapers reveal conclusively that stock markets, politics and open pit mines are relatively easy to master. Thinking ecologically, like a mountain, takes somewhat more experience. But, at long last, my sources hint that we do seem to be considering the need to plan on getting ready to think about actually doing something about

it, and maybe even pretty soon. But then, it took a long time to discover the three old dimensions still dominating most minds, and seeing the new fourth dimension takes more vision while using disturbing facts. At last, this new insight is spreading rapidly, and the rate of spread is accelerating. May the necessary deeds be close behind.

Those of us who know that wild areas on Earth's surface are among its most valuable assets must be close to thinking like a mountain. We live on a tiny speck of celestial dust which orbits about a minor star called Sun -- but even so, Earth's wild places make this otherwise minor planet the wonder of the universe. Its luxuriance of life is in sharp contrast with every other celestial object we know. Everywhere else is totally geological. Our little place is surely this solar system's Garden of Eden. But lately its luxuriance has been vanishing rapidly. People, it turns out, are Earth's biological disaster -- and here I include not just those of us dominated by bonds, ballot boxes or bulldozers, but as well, those like us who hope to save a few patches of wildness here and there.

By definition, Planet Earth is now an artifact -- an object modified by Man. It is this global modification that you and I seek to arrest here and there, in areas that we try to preserve. But we are not alone as preservationists. When you think about it, everyone is working at preserving something, whether it is profits, voter majorities, ways of life, or the right to pollute. What has the word "environment" in the media every day is the conflicts among us kinds of protectionists.

In the past, I sometimes thought that we preservers of wild places must be mad. We were like the moose that roared, not knowing that the elephant roared at was dead. Homo sapiens has a love of visible status and a fear of major change. But then too, mice have a larger biomass than elephants, and as a result have a far greater influence upon the world. Small can be beautiful, and can succeed globally. An now, at last, we ecologically-wise mice have also begun to succeed globally.

Leaving the generalities. time now for the specifics of protection. Natural areas have three sources of risk:

- o risk from natural causes;
- o risk from people acting as users; and
- o risk from people acting as protectors.

In my experience, the protection people are clearly the major source of avoidable risk.

Focusing first on Risks from Natural Causes. many are well known -- fire, flood, wind, temperature, drought, avalanche, vulcanism, and so on. These are the physical and often violent forces of damage and change. Biological natural causes, in contrast, are less well known, usually because less violent. These involve the interactions of species. An example of both plant-animal interaction and animal-animal interaction might be numerous white-tailed deer eating out favoured food plants, like red maple or white cedar, in time changing species compositions of both plants and animals in all levels of a forest. A plant-plant example could be an aggressive understory of white spruce threatening the future of a trembling aspen stand.

When natural changes involve an area dedicated simply to preserving nature, they should, of course, not be seen as problems if the changes are natural. But if, on the other hand, the intent is to keep the area as is, there are problems -- and more than you might think.

To arrest change, the obvious thoughtless solutions might include dikes, roads, fences, fire suppression, controlled burning, increased hunting, culling out unwanted plants, and so on -- and these might even become the thoughtful solutions after considering their problems.

These possible problems fall into two categories. One is that management results are almost always in a need for **continuous** management. The second is that counteracting these conditions in natural areas usually causes more damage than it prevents.

In all such management, one result seldom considered causes higher risk of future damage. This is described by my maxim, "**Improved access** is at the root of most threats to natural areas." It is a rare management effort in a wild area that does not thoughtlessly include improving access. Blame it on machines.

When possible, perhaps the best approach to protection from natural influences is to lower risks. Larger areas, for example, are less vulnerable to total destruction than smaller ones; and two separate but similar areas are overall at less risk than one. If, in the beginning, there are alternative choices, it also helps to choose areas with damage risk in mind, and of course, to aid the choosing process with as much skill as possible in assessing future risks. Think like a mountain concerned about self-preservation.

By definition, natural damage leaves the area quite natural, but damage by people leaves the area unnatural. Sounds simple enough, but unfortunately it isn't. With Earth an artifact, probably no area is totally natural anymore. We deal, therefore, not with real naturalness, but with degrees of wildness. This doesn't bother most of us, because we don't really see much of what we look at, and even our memory of how things once looked is nearly useless -- if you doubt this, ask any courtroom lawyer. But then, most of these changes are microscopic or at the molecular level, so they surface only with magnification or with chemical analysis. As a result, we seem stuck with protecting what we can of what wildness is left, while knowing that we cannot do much ourselves about some damaging conditions. After all, what **can** one do about Dutch elm disease? About DDT in Arctic ecosystems? About radioactive lichens? About dangers like acid rain and others that accompany brown skies around a dull orange sun?

Focusing now on Protection from People as Users, I have come to believe that the average person is not much of a **primary** threat to most wild areas. Individually, or in groups, most people, most of the time, have no desire, no time and no means to enter most wild country, and those increasing numbers that do seek it out usually have a personal wilderness ethic protecting the wild condition. Problems arrive when improved access increases human numbers so that too many feet, even too many careful feet, become overpowering, perhaps along with too many campfires, tenting sites, latrines, garbage pits -- a long list. Blame it on access. In general, the **individual** does very little about improving access. It is usually his **government** that improves it, or that licenses a profit seeking company to improve it, as by using float planes.

I know that these comments about users may not sit well with some of you. I was speaking of most of Canada. I am also aware of the special problems of our limited flat and fertile areas with warm summer soils that are crisscrossed by public roads. Here access is everywhere, and here protecting the wild remnants requires all possible measures. I still say, however, blame access and other amenities first, blame the other causes secondarily, for the simple reason that we can often do something about access. Relevant here is my old conviction that the best protection of Canada's wild places is done by mosquitoes and black flies.

Turning now to the *Risk from People as Protectors*, I arrive at the heart of the risk problem. "Protectors" are the people, mostly government people, who choose natural areas, make laws and regulations about them, and then administer them in all the ways that this is done. My surprise in thinking through this talk came with conclusions about this group, the one I worked in for two decades. It was a revelation described best by Pogo's much quoted line, "I have met the enemy, and he is us."

Here I will try to give titles to the areas of concern, but remember that few of them stand alone, because there is a lot of one problem causing another, and of one magnifying others.

First there are Paper Protections. As a youth, I discovered a magazine which is still my top priority for relaxed reading. The incomparable **American Museum of Natural History** in New York publishes the magazine **Natural History**, and I remember long ago reading in it about the good burghers of town councils in medieval Europe confidently passing detailed laws banishing plagues of rats from their towns, or insect pests from their fields. To make sure the unwanted creatures were fully informed, the burghers posted their proclamations where the rats, or weevils, could easily read the details. Incredible, I once thought, but years later I discovered that today's condition is not entirely different. We do a better job of choosing at whom to aim our laws, but have not improved much at getting the messages across once they become law. Proclamations on file or published in remote gazettes do not really protect the fragile wildness of land. A watchdog system using informed citizens, and law enforcement leading to publicized violations, are the only really protections. Speaking softly is not enough, and carrying a stick means nothing if it is not waved often and used occasionally.

Ironically, most provinces also have tax laws which discourage landowners from participating in the protection of wild heritage on their own lands, Ontario being the only exception I know about. [Loud cheers here for Ontario's "Terk" Bayly and associates.] In British Columbia, if you have old growth forest on your property, the trees are a tax burden, your tax being based on the value of the trees as commercial sawlogs. This can be a lot of money in the land of big trees. This taxation is a modern fossil based on old myths about inexhaustible resources and forests forever. A tree is valuable, it seems, only when a corpse. Private owners with living heritage on their property need encouragement, not punishment, for protecting the wild treasure.

But, in Canada, the main owners of wild lands are governments, and partly for this reason, no doubt, these governments are also the worst offenders damaging wild lands. Surely preventive protection should be among the highest of priorities in government offices

responsible for **protected** lands, and most of these offices, in my experience, would profess to have this priority; but do you know of such an office with one person whose sole job is maintaining effective protections of the protected lands administered? I hope you do. So far, I don't. Those offices known to me rely mainly on paper and fighting fires (so to speak) after they occur.

But perhaps this peculiar faith in paper should be of small concern, because the paper seems to hold **toothless laws** anyway. I won't belabour this one, which is really part of the belief in the magic of laws. I just want to say that in 16 years of working out of a parks head office administering many parks, I never once heard of a violation of the *Parks Act* resulting in disciplinary action, this in spite of:

- unauthorized logging roads;
- logging trespasses removing old timber;
- annual and obvious removals of armsful of wildflowers;
- cutting green trees for firewood;
- dumping refuse;
- mining out gravel;
- federal offences like shooting osprey;
- digging up red rhododendrons which are protected by two Acts, the *Parks Act* and another one specifically protecting red rhododendrons and two other plants;

and no doubt other examples not recalled. Laws on file just do not work without visible teeth to deter the lawless few and to educate the uninformed many.

And then there are Incomplete Protections. One of the great disappointments of my young life was discovering that the mess I stumbled into in Algonquin Park was the remains of a forest left by recent logging -- which I soon found had always been encouraged in that park. It continues today. The best that can be said of the Algonquin condition is that the place is misnamed. It is really a provincial forest. Calling it a "park" asks for trouble.

Later I found that most large parks in British Columbia contain mining claims and other private inholdings which predate establishment of the parks. When creating wild areas, it was easier for governments of the time to hope for no problems in their time, while passing on inevitable high cost problems to future generations. This may have made sense in 1893 (as in Algonquin) or in 1912 (as in Strathcona Park in B.C.), but the problems ignored then have been vastly enlarged now by the increasing global scarcity of both natural resources and wild areas with original vegetation.

But perhaps most disturbing of all are the Wild Areas that Vanish. When I joined Parks Branch in British Columbia, the largest park in that province rich in parks was Hamber Provincial Park, located on the west slope of the Rockies and adjacent to both Banff and Jasper National Parks. In the beginning, **Hamber Park** contained about 10,000 square kilometres, so was half again as large as Banff. Today it is a fifth its former size. One morning British Columbians awoke to find that some 7,500 square kilometres of public parkland had vanished.

But more than any other area, the prize for multiple indignities may go to **Strathcona Provincial Park**. Its many destructions have made most British Columbians wonder about the protection given their wild areas. Strathcona, established by an Act, not an Order-in-Council like most B.C. parks, has been logged, mined, flooded, polluted, shrunk in size and bisected by highway. Protests last year stopped test drilling for a second mine in a prolonged but passive conflict reported widely in the national news. This confrontation resulted in more than one gentle grandmother, among others, finding themselves in jail for violating court orders to stay away from the park. Perhaps it is unfair to expect governments, under many pressures, to be reliable **automatic** protectors of such areas -- and if this is so, watchful citizens in impressive numbers seem to be the only hope of protecting such public areas of wild land. This, I suppose, is democracy as it should be. The people are their own best watchdogs. There is at least one neat solution to this particular problem which is illustrated in a recently established ecological reserve in British Columbia. The Nature Conservancy of Canada scraped together over a quarter of a million dollars from many sources to buy a small island with old growth vegetation near Victoria. The island was to become a provincial ecological reserve, and the provincial government gave a generous part of its cost (about 40%). After the Conservancy bought the island, it gave the deed to the Nature Trust of British Columbia. The Trust then leased the island to the provincial government for 99 years, and it is now British Columbia's Ecological Reserve #121. But the Trust owns the island.

Turning to a few other problems I fell over in doing this -- if an area is natural and to be preserved as such, by definition of the word **natural** we protect it from **people**. But collectively we cloud the issue and make our protection efforts difficult to understand, by placing a confusion of descriptive labels on our wild areas, even though the names can (but may not) mean the same things in spite of their differences. Land intended to be heavily protected can be called, for example:

natural area	nature preserve	nature conservancy
nature park	national park	provincial park
regional park	wildlife preserve	wildlife reserve
wilderness area	ecological reserve	ecological preserve
wild area	trust area	primitive area

and no doubt other additions to the confusion.

To add to this chaos, in some jurisdictions some of these names are on areas receiving urban developments, summer homes, hotels, golf courses, summer camping villages, fall hunting, winter downhill skiing and spring trout fishing -- while also sometimes enduring flooding, water pollution, mining, highways, logging, grazing, poisoning lakes to encourage one species of fish, trapping, chemical spraying, and no doubt other indignities. It's a wonder anyone has confidence in what we are trying to do.

Well, is there hope? I think so -- most of the time, that is.

A whole new public approach has appeared which hasn't struggled far off the ground yet, but which will learn to fly and will correct many of the problems just outlined. The environmentally concerned generation of the 60's now matures to run things. If it retains any of its old convictions, it will change our society.

Looking ahead, I see hope, but also severe problems. Governments are the main protectors of natural and wild areas in our culture, and we the people create governments to do the things which we cannot do by ourselves. More than ever before, governments are aware that nature, ecology, environment and conservation are not, as once thought, of concern to only a few eccentrics. These things are proven to be **major** interests of a **majority** of Canadians. We **must help** governments in creative ways to serve this public interest, and one of the major needs is to show how to protect our areas of natural heritage in better ways. The tools needed are the knowledge to select best areas, laws and regulations that are simple but effective, sound real estate methods, good risk management, inspired volunteers and other creative interactions with the public. But in the final analysis, effective protection is a person with muddy boots enjoying the job, whether paid or a volunteer, someone spreading the gospel of protection **locally**, and being on site at appropriate intervals to show teeth, if only in a symbolic way. Offices don't protect wild areas.

North Americans have recently discovered volunteering in a big way, and volunteers are just right for periodic patrols, monitoring visits and neighbourhood watching to help protect many of our natural and wild areas. There are, however, pitfalls which catch nearly all uninformed beginners. A successful volunteering program is not as simple as it looks. As usual, no free lunch. There is rarely sustained progress with a corps of volunteers without someone appropriate in charge also trained to select, organize, lead, inspire, inform and listen to ideas and complaints of the volunteers attracted. To do this well can require someone on a full-time basis. Do it right and you can be rewarded by miracles, like dedicated volunteers by the dozen, many dedicated more than most staff and most enjoying working conditions like staff, including job descriptions, job training and fixed work schedules. Large museums have decades of experience with volunteering, often with outstanding success, and are perhaps the best source of rules to help beginners through what can be a dangerous mine field.

More than ever before, as I reviewed the roles of government and citizen in the areas of ecology, environment and saving some of original Earth, it was clear that governments are ready for change. They have the problem, however, of holding centuries-old values in conflict with many of the new environmental ones which surveys and opinion polls now indicate are majority public concerns. Change can be frightening; pioneering looks risky. We who are experienced in environmental matters must find the attractive compromises necessary to start the change. Governments need creative help or the opportunity to change will be lost by default. Getting better protections for natural areas on site is one way to start the trend -- and it will also demonstrate that these areas have more value than the uninformed ever suspected. Most decision-makers may not understand old growth forests, but most do know a lot about people. People and their jobs. And it is the **people** who are saying they want their wild areas kept wild.

Harnessing the work of people directly, and the clout of people directly, gives the surest kinds of protection. But this, of course, is but one step of the many needed. Our green place in space is wearing out, there is nowhere else to go, and the repair jobs needed are legion. Rocketing pressure on resource extraction are accelerating daily - and there is no limit in sight.

This means that for many habitats it is last chance to add to the protected collection, and for all protected areas, the old nineteenth and twentieth century methods are quite inadequate.

It is now a case of secure them, and really protect them, or lose them.