The Natural Area Movement in the United States, Its Past and Its Future

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Nature preservation began with emphasis on preservation of scenic grandeur and natural beauty and preservation of species.

At first, the most magnificent places, such as Yellowstone, Yosemite, and the Adirondacks got attention. Gradually, interest grew in preserving other spectacular scenic treasures. Virtually every preservation accomplishment was the result of years of dedicated struggle.

Yellowstone became the first national park in 1872. The first state parks were established in the latter part of the 1800's. The Yosemite Valley became the first state park several years after it was given to California by act of Congress in 1865 (before it became a national park). In 1872, the New York legislature established a temporary Commission on State Parks. In 1885 the legislature enacted bills making Niagara Falls New York's first state park and declaring the state-owned land in the Adirondacks would be kept "forever wild."

Voluntary organizations for nature preservation developed in accordance with the perceived needs. The Sierra Club, the Audubon Societies, and some other influential conservation groups got started in the last century. Sportsmen's organizations played a major role in the early efforts to conserve our land and wildlife.

Government agencies were established to care for the areas that were set aside and to protect wildlife. It was not until 1916 that the National Park Service was created. Eventually, through bitter struggles and dedicated persistent efforts, our present-day national, state, and local systems of parks, forests, and refuges were established and took form.

The study of natural history preceded preservation efforts. Our magnificent natural history museums and the many monumental early-day books on natural history attest to the diligent and dedicated efforts of the pioneer naturalists that explored the wilderness.

When preservation efforts finally got underway, naturalists had a substantial part in them. But, with a few notable exceptions, the old-time naturalists didn't do much about natural area preservation other than to help preserve scenic grandeur and wildlife. Either they didn't see the need or they didn't think there was much they could do about it.

The study of natural history eventually resulted in development of the science of ecology. With growth of that discipline came the need to organize a professional society. The Ecological Society of America was formed in 1917. It established a Committee on the Preservation of Natural Conditions under the chairmanship of Victor E. Shelford and charged it with listing all preserved and preservable areas in North America in which natural conditions persist and with promoting their preservation.

In 1926, the Committee completed the "Naturalist's Guide to the Americas", a description of natural conditions in the various states and regions and detailed directory of the natural areas of note that were then known to ecologists. Through the years, the Committee on the Preservation of Natural Conditions participated in the efforts to set aside parks and wilderness areas.

Natural area preservation efforts gradually took form in the early part of this century, though usually the goal of preservation of natural communities was not clearly distinguished from the goals of scenic preservation and preservation of areas for outdoor recreation. There were organized volunteer efforts to save specific areas; then regional, state, and national efforts began to develop. Organized efforts led gradually to the establishment of state and local park systems, as well as the national park system. The National

Parks Association (now called the National Parks and Conservation Association) was established in 1919 to defend the national park system. The Wilderness Society was formed in 1935 to promote the cause of preserving wilderness areas, particularly within the National Forests and other Federal lands.

A few of the groups set about raising money and acquiring land for preservation, usually to turn it over to a public park agency. The Massachusetts Trustees of Public Reservations (now called the Massachusetts Trustees of Reservations) was formed in 1891 and began acquiring natural and historic sites, some of which it continued to hold and manage. The Save-the-Redwoods League, organized in 1918, became notably successful in raising large sums of money to achieve its objective.

In 1945, some members of the Ecological Society of America objected to the Society engaging in nature preservation activities. Members of the Society that were concerned about nature preservation formed a new organization, the Ecologists Union, to carry on the work of the Society's Committee for the Preservation of Natural Conditions and Committee on the Study of Plant and Animal Communities.

By the late 1940's, it was becoming clear to participants in the Ecologists Union that our park systems, game laws, existing governmental agencies, and other conservation institutions were not adequate to preserve the full spectrum of natural communities and features. Many natural types were not preserved in any manner, and areas that were set aside in public ownership were vulnerable to degradation from intensive recreational use, development, or commodity production.

The concepts and goals of the wilderness preservation movement, as promoted by The Wilderness Society, provided a pattern, on a grand scale and with a somewhat different orientation, of what was needed for natural area preservation.

The historic preservation movement to save significant sites and buildings was gaining momentum and provided another model to follow. In 1949, historic preservationists established the National Trust for Historic Preservation under a Congressional charter as a central focus for their efforts. The National Trust was patterned after the British National Trust for Places of Historic Interest or Natural Beauty, established in 1895, which, in turn, drew its pattern from the Massachusetts Trustees of Public Reservations.

On the international level, the International Union for the Protection of Nature (later renamed the International Union for the Conservation of Nature and Natural Resources) was established in 1948. Its conferences and publications revealed that people in countries all over the world were concerned and doing something about natural area preservation.

Most every country, it seemed, had its society for the protection of nature or the promotion of nature reserves. Many of these voluntary organizations, as well as governmental agencies, owned and managed nature reserves. Some of the groups had much larger memberships than their counterparts in the United States. They numbered in the tens of thousands, compared to a few hundred in the Ecologists Union and less than 5,000 each in the National Parks Association and The Wilderness Society.

Many other countries also had government agencies specifically for nature conservation. For example in 1959 Great Britain established The Nature Conservancy under Royal Charter as an official governmental body "to provide scientific advice on the conservation and control of the natural flora and fauna of Great Britain; to establish, maintain and manage Nature Reserves in Great Britain, including the maintenance of physical features of scientific interest; and to organize and develop the research and scientific services thereto". (The Conservancy was reorganized in 1973 as the Nature Conservancy Council.)

The participants in the Ecologists Union realized that if anything was to be done to save natural areas on a systematic basis, those who were concerned would have to do the job themselves. In 1950, they changed the name of their organization to The Nature Conservancy and began adapting the successful patterns of many other groups, conservation, historic preservation, and health and welfare, to their purposes.

The Nature Conservancy embarked on a program of direct preservation of natural areas by acquisition, through chapters and project committees and proceeded to grow and accomplish great things.

Participants in the natural areas movement also fostered other structures to carry on the effort. The first state natural area legislation was enacted in Wisconsin in 1951 when the Wisconsin State Board for Preservation of Scientific Areas (now the Scientific Areas Preservation Council) was established. Illinois established the first state system of dedicated nature preserves in 1963. South Carolina became in 1976 the first state to establish a natural heritage program in cooperation with The Nature Conservancy. Most of the states now have some sort of official natural area program. Many regional and local not-for-profit organizations were established, including those that are now grouped under the general classification of land trusts. The Natural Areas Association was established in 1978 to serve as a medium of communication among natural area workers. The Land Trust Exchange was organized in 1982 to facilitate communication among land conservation organizations.

Since these efforts began to take form, we have grown and become more sophisticated. We have made inventories, assembled databases, developed operating plans and procedures, and established priorities. Where once we were opportunists, preserving what we could when we could, we now plan and direct our efforts deliberately.

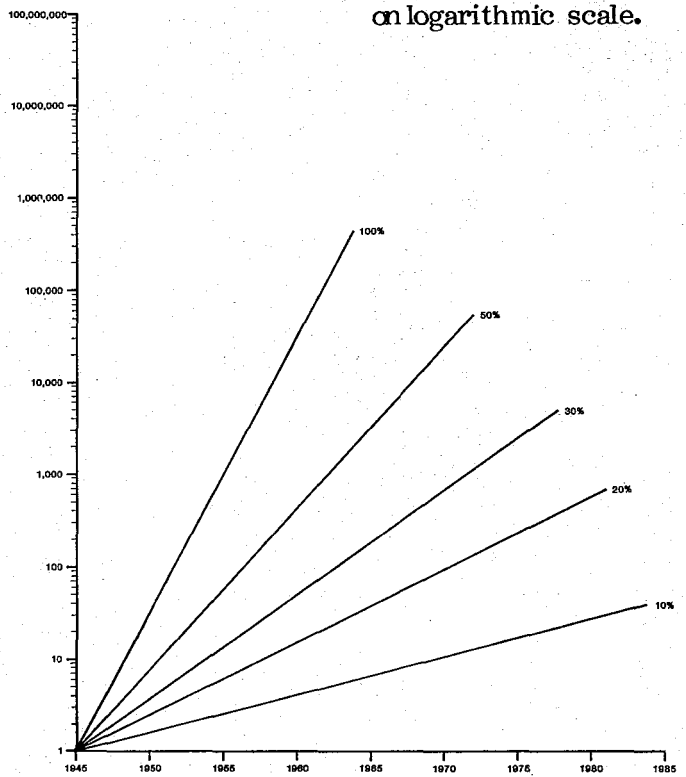
The concepts are the same, they have just been shaped and polished. The Nature Conservancy started as a landowner contact program carried out by volunteer land stewards. Then it became a professionally oriented organization with much of the work being carried out by staff. Now we are back to thinking in terms of landowner contact programs and organization of volunteer land stewards and other volunteer workers -- the same concepts, but with much more sophisticated techniques.

What has happened during the 38-year period of current history since organization of the Ecologists Union, and what does it indicate about the future?

To get a perspective, let's look at the growth that has taken place in the years since 1945 in the natural area preservation movement.

Since growth is a phenomenon of compounding by geometrical progression, we know that the best way to compare rates of growth is with a logarithmic graph, as shown in figure 1. Here we

Figure 1. Annual growth rate lines on logarithmic scale.



encompass the 40-year period between 1945 and 1985, with a vertical logarithmic scale marked with powers of 10. One and 10 are the same distance apart as 10,000,000 and 100,000,000. The lines on the graph illustrate growth rates ranging from 10% per year to 100% per year.

For comparison, let's have a look at the growth pattern exhibited by the pre-eminent blue-chip growth corporation: IBM -- also known within the computer industry as Big Blue. Figure 2 shows IBM's record from 1962 to the present. This is based on earnings statistics adjusted as though dividends were reinvested when issued. The overall indicated rate of growth is approximately 18.5% per year -- quite a phenomenal record of consistent sustained growth through good times and bad.

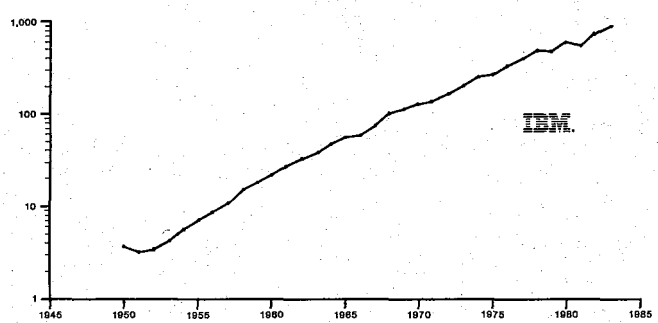


Figure 2. Accumulated earnings of IBM, with dividends reinvested.

Now let's look at another organization that goes by a 3-letter acronym: TNC. Maybe we should call it Big Oak Leaf.

Figure 3 charts membership numbers for The Nature Conservancy, from the 130-member beginning of the Ecologists Union in 1945 to the present 160,000+ members -- a growth line, with very few wobbles, that has achieved a 38-year record of 21.5% per year.

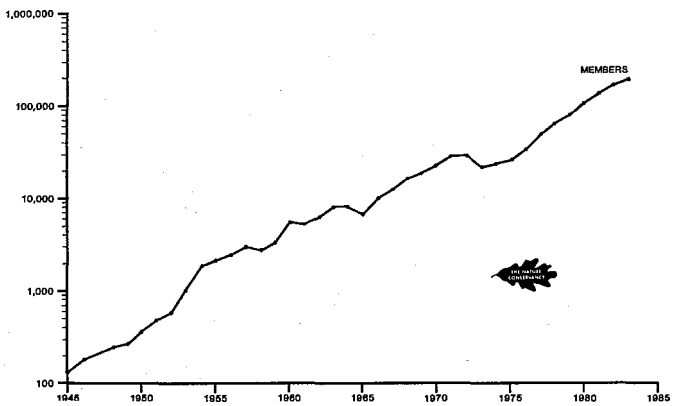


Figure 3. Number of members of The Nature Conservancy.

One might analyze the factors that have influenced the Conservancy's membership growth from year to year: the effects of volunteer membership recruitment efforts by chapters, project committees, and individuals through prolonged periods of years when the national organization made little or no deliberate membership recruitment efforts; the effects of emphasis on direct mail solicitation in the 1950's and again in recent years; the effects of changes in policies and administration; and the changes that may have taken place from time to time in the standards for counting members of different categories. But these are minor details that are engulfed in a seemingly inexhorable trend.

One also might speculate on what the future will and can bring. Another 38 years on the same growth line would see TNC's membership getting pretty close to encompassing the entire population of the United States. But we know exponential growth cannot continue indefinitely. As Aldo Leopold and others demonstrated in the early days of the science of wildlife management, sooner or later adverse factors will begin to take their toll and hold down the rate of growth until finally it is level at best. The principles underlying the concept of the "balance of nature" apply to populations of organization members just as they do to wildlife populations out on the land. There is the additional limitation that there is a finite number of potential members.

Let's now look at another measure of TNC's growth. Figure 4 charts progress in land preservation as indicated by cumulative number of land preservation projects and cumulative number of acres preserved. Here, the overall annual growth rates from the first project to the present and from the first acre preserved to the present are approximately 29.3% and 38.8%, respectively.

Again, one might analyze the wobbles from year to year: the contribution of volunteer project efforts in comparison with big land deals engineered by professional staff; the changes of plans, policy, and procedures from time to time; the effects of inventories, database accumulation, and prioritizing of projects; changes in emphasis between independent projects and preacquisition for governmental agencies; the effects of changes in governmental policy, changes in the economy, and changes in public interest and attitude; and possible changes over the years in the rules for tallying projects and acres. But again, these factors seem overshadowed in comparison with the long-term trends.

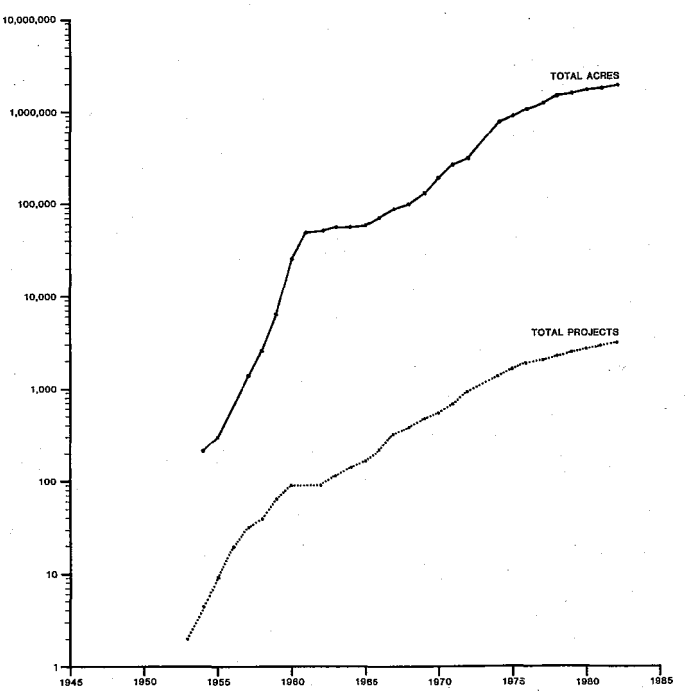


Figure 4. Cumulative number of land preservation projects and cumulative number of acres preserved by The Nature Conservancy.

Figure 5 charts the financial aspect of TNC's history, with one line representing total annual general operating fund revenue and support and the other showing total fund balances. There may be some discrepancies from year to year as a result of changes in accounting policies. More detailed research would probably make it possible to eliminate some of the kinks in the lines; but no matter, they are remarkably consistent already. These lines show overall annual growth rates of approximately 33.2% and 47%, respectively.

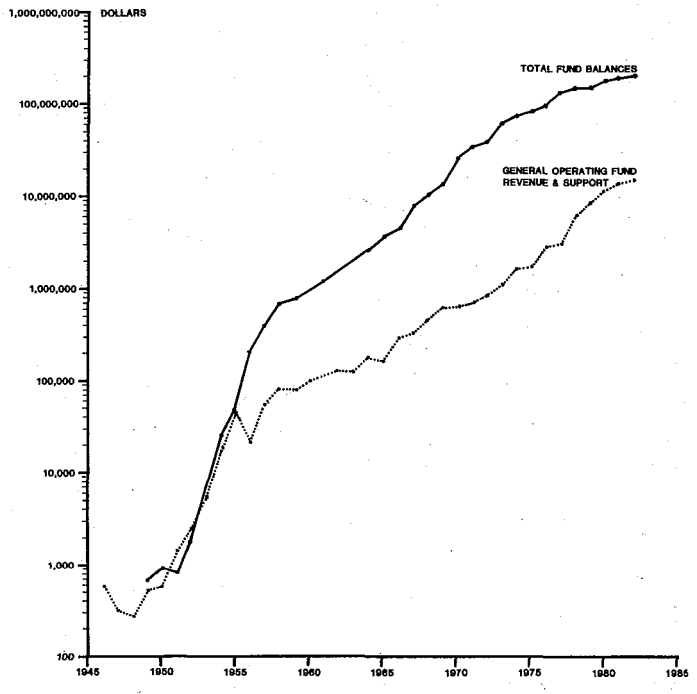


Figure 5. Annual general operating fund revenue and support and total fund balances, including land holdings, of The Nature Conservancy.

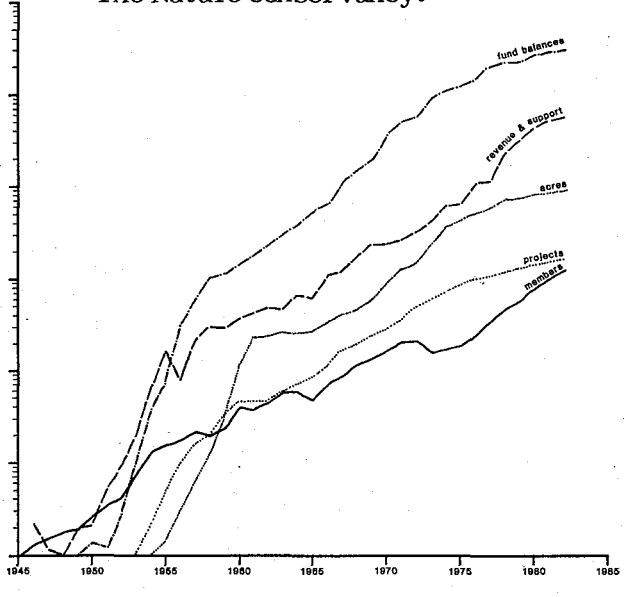


Figure 6. Growth lines of The Nature Conservancy superimposed for comparison.

In figure 6, the growth lines are superimposed making it easier to compare the trends. The five lines together exhibit an average growth rate of 34% per year for the 38-year period.

What significance do these charts have? What do they portend as to the future?

Clearly, TNC has had a remarkable growth history. Through the administrations of 11 chief executive officers and numerous other officers and Governors; through cycles of prosperity and recession; through years of war, turmoil, and political and social change, growth has continued consistently and seemingly almost inexhorably. Has it been pushed forward by a remarkable sequence of administrative talent, or an outstanding organizational concept and structure, or the combined, determined efforts of a growing band of dedicated believers? It is obvious that the latter is the key factor.

One thing that seems evident in the charts is a tendency toward levelling off of some of the lines. The membership line, however, is moving steadily upward. Many factors that may contribute to various trends and changes could be analyzed and discussed -- the influence of governmental fiscal and land acquisition policies; increasing selectivity in undertaking preservation projects; and changes in trends of support from foundations, corporations, and individual members are examples.

These growth trends of TNC do not stand alone. They are just examples of the growth that has been taking place in preservation programs in general.

One could plot similar growth trends for state natural area programs, for land trusts, for historic preservation, and for other conservation and environmental organizations and movements. We could analyze and in some cases chart many aspects of natural area preservation -- the development of inventories and heritage databases, our changing concepts and practices in natural area management, our development of policy, and the enactment of state legislation.

We could compare the fortunes of the natural area movement with those of other related endeavors. We could compare the relative success of various components of the natural area movement. We could analyze how natural area preservation has fared in comparison with other aspects of conser-

vation, and why. And we could compare these records with the growth in the GNP and with other indicators of change in our economy. There is much possibility for fruitful and illuminating research.

We should not be smug and complacent as a result of the apparent accomplishments during these past years. A bit of charting of unmet preservation needs, of rates of destruction of natural areas, of comparisons between the amount of natural land preserved and the amount destroyed, or of the management deficiencies and deterioration of some of our nature preserves might yield results as startling as TNC growth lines, but not so exhilerating.

What can we foresee for the future, and what actions should we take to influence the course of events? There are many questions that demand our careful consideration and yield no clear and simple answers.

What are the limits of growth of the natural area movement? Careful analysis and projection of the TNC growth statistics and of the growth lines of other organizations and movements might yield us some clues.

What are the future prospects of TNC? Will it continue to prosper in the years ahead; or will prosperity, size, and bureaucratization lead to complacency and stifling of initiative? Will there be a point where growth of revenue can no longer sustain expanding personnel costs? Will there be a continuing balance between volunteer and professional participation, or will one eclipse the other? Will the cost of maintaining preserved areas be sustainable?

Will TNC's business administration acumen foresee and avoid future pitfalls and keep the organization going on a steady course? And, on the other hand, will emphasis on the competitive methods and techniques of the business world damage the organization's integrity as a volunteer charity and its ability to work cooperatively with other groups?

What are the prospects for land trusts and other preservation organizations? Will they pace TNC, be left behind, or ultimately take over? Should we concentrate our efforts and support on TNC to assure its continuing strength and effectiveness, or should we also be concerned about developing other organizations as backups, and as competitors to keep TNC on its toes?

What are the prospects for our state governmental programs? How can we secure them against political change? How can we facilitate the development of programs in states that do not yet have natural area programs, and how can we encourage the lagging states to keep up with those that are leaders? Also, how can we get even the leading states to undertake programs that remotely approach what they should do and could easily afford to do? How can we structure and develop nonprofit support organizations that will strengthen and help stabilize state governmental nature preserve programs?

What can we do to secure adequate federal legislation and programs for natural areas? How do we induce federal landholding agencies to make reasonable efforts to set aside natural areas?

How do we fit our programs in with established agencies and programs at all levels of government? The natural area movement arrived late on the conservation scene. Securing its appropriate place and status within established rigid administrative hierarchies can be a difficult problem.

How do we keep up with and exploit modern technology? To do justice to our cause, we must adapt ourselves to the computer age. We must make deliberate and continuing efforts to learn about and make use of the technological innovations that are being developed and made available with incredible rapidity.

How do we deal with the increasing cost of labor? How can we best make use of volunteers and other alternatives to paid workers?

How do we develop our movement into a perpetual protector of natural areas that will stand up against the ravages of vandals (political as well as physical) and exotics? This is the ultimate question.

What happens when the crunch comes? Can we construct institutions and traditions that will endure? Can we provide the physical protection that may be needed?

We must learn more about psychology -- about how to induce people to respect and protect nature preserves. Also, we must understand our own feelings and motivations. For instance, we should

understand the phenomenon of paranoia, its functions and its value in motivating defensive action before it is too late, as well as the hazard of it getting out of hand. To what extent is it necessary, feasible, and desirable to build "walls" around nature preserves?

Barriers and gates certainly are necessary to deter intrusions in many situations. They also serve another function. They can have value in making people feel the place they are entering is something special that is set aside from the rest of the world and deserves special care and respect. We have done little to learn about and exploit such subtle effects. The techniques are already well known and developed by others. Examples of effective entrance gates can be seen in many places.

What are the trends in human behavior and interest -- can we predict and exploit them? Is the environmental movement a passing fad, or is it part of the long-term development of our civilization? Can we depend on the developing interest in heritage preservation to sustain the natural area movement in the future as it has over the past 38 years? We must hope that as natural areas become increasingly rare they will continue to become increasingly precious to people.

What are the tools for achieving permanence? And how can we use them? We are aware of them in a general sense, but we need to consider them deliberately and carefully since the success of our efforts is so critically dependent on long- term stability. We do not share with many other endeavors the ability to start over again and rebuild in case we suffer losses.

Maybe we can learn from past efforts and failures to create perpetual monuments. Let us remember the fate of Ozymandias' works:

I met a traveler from an antique land,
Who said: Two vast and trunkless legs of stone
Stand in the desert. Near them, on the sand,
Half sunk, a shattered visage lies, whose frown
And wrinkled lip and sneer of cold command,
Tell that its sculptor well those passions read,
Which yet survive stamped on these lifeless things
The hand that mocked them, and the heart that fed:
And on the pedestal these words appear:
'My name is Ozymandias, King of Kings:
Look on my works, ye mighty, and dispair!'
Nothing beside remains. Round the decay
Of that colossal wreck, boundless and bare
The lone and level sands stretch far away.

OZYMANDIAS
Percy Bysshe Shelley
1817

We have an advantage over the builders of structural monuments. Natural communities do not suffer directly from the ravages of time. They are self-renewing. However, they may change through natural processes. And they can be done in by vandals of many kinds, by exotics, by man-caused environmental changes, by natural catastrophies, or by adverse influences resulting from inadequate size.

We need to sort out and analyze these various influences and concentrate our efforts where they are most needed.

We should evaluate and understand the legal strength of preservation laws and institutions. We should also evaluate the political strength of our institutions. We know the natural areas movement has a strong and growing body of people who are dedicated to its concepts. We know they will rally vigorously, even fiercely, to the defense of a natural area that is in jeopardy. Will they be equally effective in protecting the laws, the agencies, and the administrative structures we have developed to carry out the preservation task; or are these things too obscure and complex to generate the defense they may need? Are the threats and changes too subtle and gradual to be noticed by any but the most perceptive? Are these institutions vulnerable to destruction or damaging changes at the whim of a politician or administrator that happens to gain power for even a brief moment?

To counteract the threat of capricious change, we must back up our efforts with carefully designed layers of safeguards -- public information programs; state nature preserve systems; established tradition; legislation; commissions and boards to serve as watchdogs over the preserves held by other bodies; permanent staff positions; stable funding sources; and establishment of support and defense networks involving volunteer participants, nonprofit organizations, and agencies at all levels.

Some of these tools of enduring preservation have

already demonstrated impressive effectiveness. Others are proving to be more vulnerable than we had hoped and need improvement. Laws establishing state nature preserve systems and various other protective provisions have so far been highly effective in diverting development agencies such as highway departments away from preserved, or even inventoried, natural areas. It seems that as long as laws and policies for protection of natural areas are in place they are likely to be respected and effective. Governmental administrative structures, on the other hand, are difficult to develop and institutionalize in such a way as to make them secure from administrative change.

The natural areas movement runs a risk of falling victim to subtle and seemingly innocuous changes that over time can bring serious damage. The plight of the national wildlife refuges, as described in Jim Doherty's article, "Refuges on the Rocks", in the July 1983 issue of AUDUBON magazine, shows what can easily happen to nature preserves if we are not vigilant. What may appear to be minor concessions of recreational or utilitarian intrusions in nature preserves can start an almost irreversible trend of deterioration. Nothing is more difficult to eradicate than an established adverse use.

As natural area specialists, we are somewhat isolated from the long-standing and ongoing controversy between the preservation and utilitarian aspects of conservation. The depth and significance of this philosophical split must be studied in historical perspective to be understood. Natural area preservation seems relatively benign and acceptable to all persuasions of conservation philosophy. One may therefore feel the divergence between the philosophies of preservation and conservation for consumptive use is not really significant to the natural area movement. In reality, the issues are much the same for the protection of natural areas from intrusions as they are for wilderness areas and national parks.

There are other critical policy questions that deserve our careful attention.

Should we be content to stop when our ark is stocked with a couple of representatives of each major natural type and element of natural diversity? Or are we justified in seeking to preserve much more, on the basis that whatever we can accomplish in many parts of the country will really be far less than adequate? We may have a tendency to be timid in our goals and too fearful that we will get more areas than we can maintain, that less than pristine areas cannot be defended or will downgrade our nature preserve systems, or that our credibility will be damaged with other land managing interests if we appear too greedy.

How much is possible or enough is largely a matter of perspective. With really so very little in sight, it is easy to set our goals too low. There once was a time when The Nature Conservancy's Board of Governors discussed whether or not three field representatives -- western, midwestern, and eastern -- were sufficient staff. And it took quite awhile before having staff at the state level was thought to be appropriate.

Do we run a risk, in concerning ourselves with preserving natural diversity, of becoming too preoccupied with species preservation at the risk of neglecting the preservation of natural communities? The concept of preserving species seems in a way easier to understand and more appealing than the concept of preserving natural communities. They are both needed, and surely it is essential to expand our understanding of the diversity of natural communities and to preserve not only the major types but their variations as well.

All of these observations and questions tell little of the future of the natural area movement. But they may contribute a bit to our perceptions and stimulate further thought and discussion. Many of these matters are ongoing concerns of the Natural Areas Association and have been subjects of discussion in the Natural Areas Journal and in natural area workshops. Others have been neglected.

There is much room for interesting and productive research on many matters in addition to such difficult and essential subjects as techniques for controlling exotics and managing natural vegetation. For instance, we should encourage studies relating to growth and management of organizations within the natural area field and within other conservation endeavors. Maybe there are students of business administration or political or social science who could undertake such studies.

Here, in conclusion, is one more observation:

I think we who work in the natural area pre-

servation movement are blessed -- we are truly chosen people.

We are living in affluence in a period of exciting and fascinating rapid change, enjoying a great many benefits never before available.

Moreover:

We are doing what we want to do, in relative comfort, without privation or great self-sacrifice.

We have a great group of people to work and associate with.

We have many supporters and a multitude of well-wishers.

We have a cause. How many people have a cause -- of any kind -- a purpose in life?

We have a noble cause. What nobler cause can there possibly be? Certainly, in our minds, what we do is as important and selfless as feeding the hungry, healing the sick, teaching, and helping people in other ways. In a way it should be more long lasting. To us, our work is among the most basic of charities.

We fight a difficult and frustrating battle, with tragic losses, but we are making great accomplishments. What other cause can claim more?

Almost nobody before us had seen the need or been able to set aside natural areas. And those that follow will no longer have the chance. They will only be able to care for what we leave them.

As dedicated workers in this totally unique situation, we have an obligation to pursue our goals with all the strength and fervor we can.

EDITORS NOTE:
The author has been directly active in natural areas work in the United States since 1949 and since then has served as an officer in the Ecologists Union, the Executive Director of The Nature Conservancy, founder of the Natural Land Institute and has most recently served as the first secretary-treasurer of the Natural Areas Association.