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FIVE DECADES PAST--and the FUTURE

by GEORGE B. HARTZOG, Jr.
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Those hearty explorers who made up the Washburn-Langford-Doane party investigating that mysterious land we today call Yellowstone must surely have subscribed to the adage 'the future belongs to those who prepare for it.' Today we would call those investigators of the early 70's 'park planners of the first order' for from their imaginative minds emerged a concept which has grown to become a national tradition of conservation for the general welfare. The establishment of Yellowstone National Park by the Congress in 1872 was a tangible and remarkably advanced step forward in our country's changing public land policy.

As with all truly great concepts, however, the vision of those men was at first difficult for the people to comprehend since they were preoccupied with national expansion and exploitation, and while the Congress gave authority to create a "pleasuring ground" for a national purpose, it remained for those stalwart conservationists headed by our first Director, Stephen Tyng Mather, to bring this concept into fruition with the enactment, in 1916, of legislation establishing a National Park System.

The intervening 46 years between the birth of an idea around a campfire, and its emergence into a broad law of the land in no way diminished the brilliance of this salutary concept. Indeed, those years bespeak the growing awareness on the part of a young nation for the need to preserve the grandeur—those natural marvels which a people hold truly priceless and irreplaceable—and of the desperate necessity to give to all future Americans those inspirational and recreational opportunities they must have to remain strong and healthy.

Part and parcel of any program designed to meet the needs of people is growth. It is to the everlasting credit of Mather, of those who joined with him in this work, and of those who supported him, that they have broadened the formula and extended its scope. Today, we have a system of national areas second to none in the world. It has taken us five decades.

Failure to carry on this noble principle of recreation-conservation would be to break faith not only with the founders of the movement, but with unborn Americans as well.



A short five years after assuming the Directorship of the National Park System, Stephen Mather recognized that the superlative areas under his stewardship were by no means the complete answer to the Nation's growing need for outdoor recreation opportunities. In January, 1921 he called together, at Des Moines, Iowa the park and conservation leaders of those states then supporting systems of their own, and from this meeting grew the National Conference on State Parks, an organization which today works closely with the national system in meeting the inspirational and recreational requirements of our growing population. This is as it should be for with national growth comes diversity of need. Coupled with greater mobility, increasing leisure time, and more recreational dollars to spend, Americans today seek ever-new and

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ever-different outdoor experiences, and the State, regional, county and metropolitan park systems are doing superb work in helping to meet the recreational needs of people.

The National Park System received another stimulus to its growth in diversity in 1936 with the enactment of the Park, Parkway and Recreation Area legislation, following closely upon the heels of the absorption into the System of military and historic parks. Here was true diversity with its manifold opportunities to serve our people. Parks are people-serving, public-owned properties. Human desires demand different experiences for their satisfaction, and with each experience can come both personal gratification and increased knowledge.

May we now sit back, fold our hands across our collective laps, look smugly, and say: "Well done; we have now met all of the needs of all of the people." Hardly. Not while there is a population growth. Not while there are technological advances upon an unspoiled natural beauty. Not while

there remains despoliation in the wake of commercial enterprise. Not so long as an urban sprawl advances into yet untouched wilderness.

The history of earlier civilizations teaches at least one important lesson: those values which are most meaningful, most essential to human welfare are destroyed in the attainment of a materialistic life of which they are often an essential part. As a nation, we could find ourselves traveling down that same well-worn road former cultures had followed.

Our greatest conservation challenge today is to develop an intelligent and dynamic equilibrium between America's exhaustible store of natural and historical resources and the ever-increasing requirements of modern life. As all public land managing agencies are learning—at all levels of government—we must be increasingly concerned with the total relation of individual areas we manage to the world that surrounds them. If we are to achieve our national conservation goals, there must be a free communication of ideas and an enthusiastic and aggressive community of effort.

Even with the advantages of the Land and Water Conservation Fund, it is going to take more than an enlarged public purse to acquire the much needed recreation and conservation areas, wildlife refuges, the scenic parks and city parks and playgrounds. A heightened sense of stewardship is a demanding challenge for those who are the private owners of open land—land which taken together constitutes the largest conservation reservoir around our cities. Conservation of natural resources and the attainment of natural beauty are goals to which all citizens can contribute.

With increasing emphasis being focused upon reservoir recreation areas, national seashores, lakeshores, and wild rivers we must not relax our efforts to acquire and develop such new areas for additional recreational opportunities. With the rapid dwindling of available superlative scenic grandeur lands, we must make haste in setting them aside now lest they be lost to us forever. With the ceaseless march of urban and suburban growth, we must bend every effort to retain those man-made structures of truly historic significance so that the past may be read upon the land.

The hope for facility and property expansion may be altruistic, but it also may not be entirely realistic if we consider that more people will come to see and enjoy those national park wonders about which they have heard all of their urban-oriented lives. That they shall continue to demand their opportunity to look down into the Grand Canyon, to gaze in awe at the Valley of the Yosemite, to see Old Faithful erupt, or to feel the humility which accompanies a stroll among the giant trees of a redwood forest, is not open to question. Indeed, more and more people will want to enjoy these experiences of a lifetime. Even a limitless number of new nationally significant areas will not deter people in their desire to see the famous old scenes—but they will have, in ever-increasing numbers, the mobility and the resources to get them to the new wonders we must preserve for them.

Nor will people be satisfied with the 'passive' type of outdoor recreation. This point is made amply clear in the statistics reflecting the phenomenal growth of the recreation vehicle industry. From 88 thousand units sold in 1961 to 234 thousand sold in 1965—more than 375 percent growth in 4 short years—we can well imagine the trend of people of all ages and all financial circumstance toward active participation in outdoor recreation!

In recent months there has been developed by the editor of this publication, Ira B. Lykes, a new philosophy which he calls 'The Total Experience'. This fresh approach recognizes that ever greater numbers of families are taking to the road with recreational vehicles, with tents and other camping paraphernalia, in search of a new and different out-

(Continued on page 23)



Heeding naught but mighty Nature's whim
Stand guard these regal sentinels
Garbed in cinnamon and verdant hue,
Reaching toward an endless blue—
Disdaining man,
Obeisance pay they not—except to Him!

—Ira B. Lykes

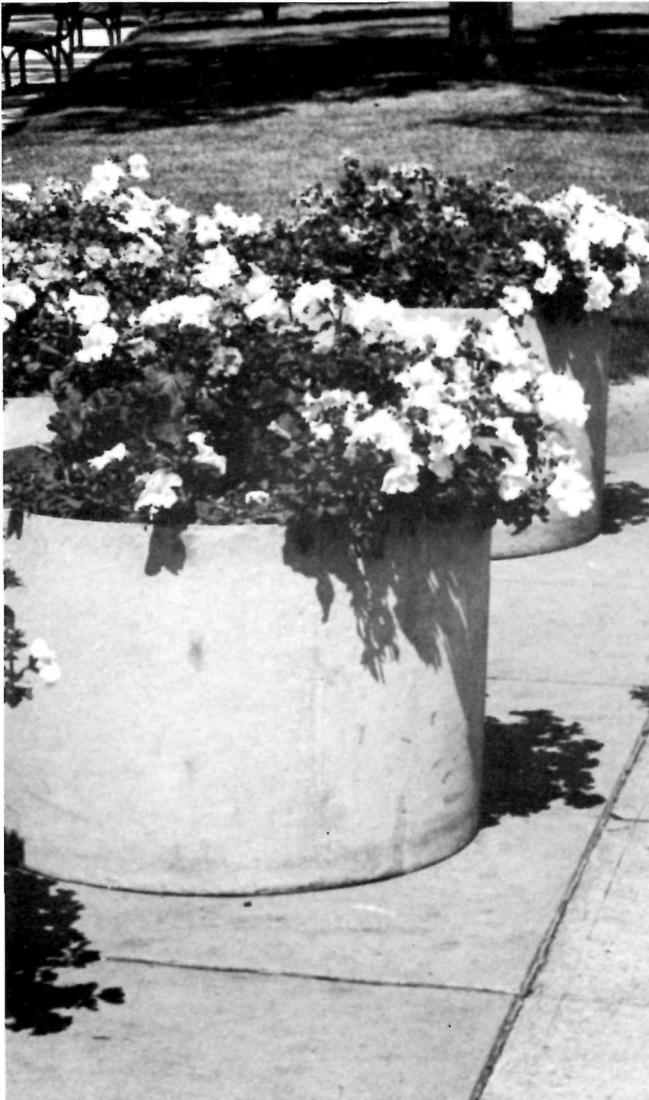
Yosemite National Park, California

NPS Photo by Ralph H. Anderson



Editorial

The STEWARDSHIP of PARKS



America has come a long way in time and in material things since the establishment of the first municipal open space, reputed to be Boston Common. Originally set aside by the good people of Boston as a pasture where all could graze their stock, it became a park when it ceased to serve economically and compatibly its original purpose. Then the community leaders wisely proscribed any kind of civic structural development thereon and, even more wisely, arranged that it be retained in public ownership and dedicated to the worthy purposes of inspiration and refreshment of people.

Down through the years, a few minor improvements were made: walks were laid out, trees were planted, benches for rest and refreshment were placed. Then came drinking fountains and the inevitable trash receptacles. Except for these few simple "improvements", Boston Common remains to our time an open space in a bustling energetic city. One might aptly call it 'An Emerald in the Crown of a Metropolis.'

Throughout the Nation other municipalities are striving now to emulate this open-space concept. This is laudable, albeit long overdue. Important undertakings, such as the preservation of natural beauty for public inspiration and refreshment, require purposeful dedication, but they require considerably more than dedication alone—they must have talented, resourceful people into whose hands may be entrusted the designing, the developing, the managing, and the protecting of these valuable properties.

Creating, managing, and guaranteeing the inviolability of open space is today of increasingly important concern. We have indeed come a long way in park and open space since the day of the admirable Boston Common concept. Today we have a science involving many sciences and arts—from resource planning to architecture; from geology to history; from engineering to paleontology; from ichtheology to landscape architecture; from law to accounting—the list of disciplines needed in the work today is almost endless.

The minds of men on boards and commissions, and those who make the laws, must be atuned to the demands of the people our parks and other areas are intended to serve. There must also be an appreciation by these men for the special talents and dedication of the people who make the whole business tick. These are the people who prepared themselves education-wise, and who are committing their careers to the service of an increasingly important cause. They are people who must be made to feel secure in their work the better to serve the cause to which they have dedicated themselves. A mind free of anxiety is one free to create, and creativity is vital to progress.

Fortunately, many intellectual giants have come forth through the years to champion the cause of preservation and good management of parks and open space—men like Gifford Pinchot, John Muir, Frederick Law Olmstead, Teddy Roosevelt, Aldo Leopold, William O. Douglas, and a host of others. All became leaders in conservation because they knew its true meaning and that it embraced both people and places. They also mastered the fine art of this thing we call 'human relations' for they understood the capabilities and limitations of men, the better to inspire and reassure them. Such leadership can only result in dedication by others who have the sensitivity to be inspired.

Our world of conservation needs more inspired people—capable people who are prepared and willing to devote a lifetime to the effort. It also needs more intellectual giants to inspire them and to reassure them. The field isn't the least bit crowded.

—IBL

A speech to the Family Camping Workshop, North Carolina State University at Raleigh, North Carolina, December 6, 1965.

The limitations on the purposes and goals of family camping are few. Indeed, family camping is like that very popular children's plaything—"Silly Putty"—you can mold and shape it to your wishes, your abilities, your desires of the moment. However, family camping is, for all its intangibility, a very real activity.

of that summer he had spent more than half his life outdoors, including two weeks in the Rocky Mountain National Park, camping at 9,600 feet elevation.

Camping is a way of life in the Shedd household, and we are fortunate indeed that my job blends vocation with avocation. My wife, Edith, is an active outdoor writer, Editor of the Family Camping Federation Leader, a Girl Scout leader, trainer, day camp director. The four children avidly share our interests and pleasures.

The consensus of at least one biased family on the purposes of family camping is that we like to get out of our city dwelling and into the outdoors to sleep in our cloth house—to hike a trail—to enjoy the scenery—to participate in an activity together. We like to unwind from the hustle

PURPOSES and GOALS of FAMILY CAMPING by DONALD H. SHEDD

By the very nature of the subject, this discussion will in some measure be founded upon personal experience and by this means perhaps I can relate to campground owners, operators, and entrepreneurs in a growing field; to camp people, to educators, and to government agencies what may reasonably be expected to be the motivating influences of the public we are planning to serve.

As a youth living in the Shenandoah Valley of Virginia between the Blue Ridge and Alleghenies, I had my first opportunity to learn of the outdoors through Boy Scouting. My interests were directed to the outdoors since my family life was rather well indoor-oriented. I wanted something more than the pipe and crossword puzzle which filled my Dad's leisure time. As time went on and my interests grew, I had the good fortune of being a student at Dartmouth College close to the White Mountains of New Hampshire and the Green Mountains of Vermont. Participation in the Dartmouth Outing Club program prepared me for more outdoor enjoyment by developing within me certain outdoor skills and techniques. Following my military involvement in World War II came bachelor days in Chicago which placed me within easy driving distance of the Quetico-Superior Boundary Canoe Waters area. It was here that I was inspired to utilize much of my available free time in the outdoors. This activity I found to be a relief valve for the pressures of the business world and the confinement of the bustling city.

Some years after marriage and children I found I could return to my old outdoor pursuits. Activity in Boy Scout leadership and training other adults in outdoor skills led my wife to adopt the philosophy "if you can't beat 'em, join 'em." So family camping was begun by buying our first tent.

We became very closely attached as a family through the camping experience. As the children increased in number, the ages at which they started camping became younger. Our oldest daughter, now 14, started camping at 2 1/2, her sister, now 12, first slept under canvass at 6 months, the third daughter, age 9, commenced watching the trees swaying in the wind at 3 months. And finally our son, now a robust 7, enjoyed his first camping trip in an Iowa State Park at the ripe old age of 11 days. By the end



● Mr. Shedd received his B.S. degree in Zoology in 1949 from the University of Georgia. During World War II, he attended Virginia Military Institute, Pennsylvania State College and later Dartmouth College where he majored in Chemistry-Zoology.

Mr. Shedd has experience as a teacher, writer, and researcher in the fields of conservation and adult education. He is a member of the American Camping Association, Family Camping Federation, National Water Safety Congress, and many other professional and conservation organizations.

For the past three years, he has been Recreation Resource Specialist for the Bureau of Outdoor Recreation in Atlanta, Georgia.

and bustle of meetings, deadlines, telephones, mechanical monsters—and we have found no better place or time than when we are family camping. There is nothing like a little creative stump-sitting to smooth the ragged edges!

Not all people motivated to try at least one camping trip will be able to put into words all of their reasons for going. There are almost as many reasons as there are people, but let us see if we can capture some of their philosophy and thinking.

Why do people camp? We are continually encountering the suggestion that it is the only way a family can afford a vacation, particularly the present day family averaging 4.3 persons. I will agree in part that camping affords opportunities for vacations at less cost than some forms of leisure time activity. Surveys made in different parts of the country show that the income of the average camper runs between \$7,500 and \$10,000. In an early survey made in Oregon in the late 1950's it was disclosed that the average income of campers was right at \$7,500 per annum with the next highest group over \$10,000. A similar spread was shown in an informal survey I made in Atlanta several years ago. I suggest that income at this level does not mean that these people could not afford some other activity if they made judicious use of their disposable income. Family camping in our present technological age can represent a sizable investment in goods and, for many, a similar sum in services. It is not necessary to have the latest gadgetry in camping equipment, but it would, we rationalize, make the 'chore' easier. The solution for some is the do-it-yourself project, which in a final analysis may cost the proud handyman five times what he would have paid for a similar product commercially produced. But then the pride of accomplishment, the satisfaction, the leisure time consumed would be a value in its own right.

In addition to the economics of family camping (from the consumers point of view) a very large area of concern to the sociologist is motivation. What makes the family want to camp? Is it a desire to see the country, to enjoy the beauties of our splendid land, to share the routes and paths of our early settlers and explorers? Is it to see where father or mother once lived, to visit grandparents or other relatives? Could it be a desire to add to the rock collection some specimens found only in northern Arizona, some garnets or rubies of North Carolina fame? Is the camping trip the means by which the family may participate in father's trip to a professional society meeting? The foregoing reasons all relate to a class of family camper to whom we may refer as the "travel camper." Another group may be the base or destination camper—those who go to an area and stays there for the two weeks, taking day trips out to see, explore and learn. I think here of my personal observations of the travel camper versus the base camper and what the individuals may learn of an area. The family that leaves the East coast on a Friday night, crosses the continent via a southern route taking in the Grand Canyon, swings along the Pacific Coast and then heads back east by way of Yellowstone and the Badlands and arrives home in 17 days or 21 days, may have traveled some 8,000 miles and exposed reels of movie film. But when you ask whether they enjoyed their trip down to the floor of the Grand Canyon, they look startled and say, "Oh, we didn't have time. We got there about 10 o'clock and looked around. We had to make the next 200 miles by afternoon." What have they learned of the places they have visited? Will they get to go again? Is all they wanted simply a collection of stickers for their station wagon rear window? Perhaps fast cars,

fast road, and fast film are the way to record the beauties of camping, but it just doesn't happen to be my cup of tea. What are we going to do to slow these folks down, to help them enjoy the opportunities we have, the attractions of our areas, provide them reasons for coming back? I will come back to these questions a little later.

Another type of camper is the one who is out for the weekend. He can get away on Friday night and head for his favorite campsite to see his regular camping friends or to keep working at landing the big one in the deep hole of his favorite stream. The weekend social camper is with us by the thousands. He wants his outdoors, he wants all the comforts of home, he brings everything, including the kitchen sink, with him. He is limited only by the cubic footage available inside and on top of his vehicle and the size of the trailer he can pull. He finds the family gathering or the meeting of his social club in the woods an ideal way of participating in family camping. Now, for every type of camper I have mentioned there are dozens of other variations—some family campers express their objectives volubly, others are just there, the reasons lying latent in their minds.

Age is no criteria in determining who will be our campers. There will be the tiny babies howling lustily, or looking cute and cuddly; there are the toddlers giving mother and older brothers and sisters a merry chase; the running hordes of Daniel Boones keeping the Indians behind the rocky bluff; there are the teenagers with their transistors, and their electric guitars with amplifiers pouring forth blatant tones from the shelter building on into the evening, or those more interested in seeing how many layers of sun tan they can accumulate on the maximum square footage of epidermis; from young families to the middle age couple calmly droning in the sun reading the Sunday paper; to the retired couple enjoying their camping vehicle with every built-in convenience as they rove the country to see the places they have read about for years. Even the golden agers accompanying their grandchildren participating in activities they never had the opportunity to enjoy when they were growing up—"Why when I was a boy I worked 14 hours a day six days a week and if I wanted to do any courting I had to hitch up the buggy and go 5 miles to your grandmother's house. We didn't have time for this kind of thing. Besides, after working in the field all day who would want to sleep in one?"

Well, times change and in spite of all the reasons for camping, we find ourselves agreeing with Henry van Dyke who wrote: "The people who always live in houses, and sleep on beds and walk on pavements, and buy their food from butchers and bakers and grocers, are not the most blessed inhabitants of this wide and various earth When man abides in tents, after the manner of the early patriarchs, the face of the world is renewed."

Let us think for a few moments on what the family camper may be expecting the campground operator to provide for their experiences. Many surveys, questionnaires and inquiries indicate that the camper desires his own camping site physically defined and separated from his neighbor. He wants to know and feel assured that others are present but not to such a degree that he can watch shadows showing on the wall of the tent or tent trailer next to him. He desires a potable water supply reasonably close and sanitary facilities that, above all, are clean and odor free. Modern day health requirements are dictating specific features in the handling of wastes and with the impact of numbers a well designed toilet facility is a necessity. The camper wants to have his motor vehicle

within easy reach, since it may serve as additional bedroom or storage space. It is also the umbilical cord that connects him with this age of mechanical monsters. But the camper, as unpredictable as he is, also wants to have a place to kindle his fire, and to sit around this primitive symbol of comfort in his contact with a past he is trying to recapture. The family man prefers to have a place where his off-spring can roam and play. The more experienced younger camper does not demand contrived traditional play equipment whereas the newcomer to the art of camping is lost without some man-made bridge to the world of play he or she has been brought up to accept.

Family campers will vary in their desires for devices and avenues in which to express their inhibitions in the outdoors. A quiet lazy pathway through a grove of trees, crossing a brook, climbing a hillside, traversing a swamp, passing by an old logging mill, may be sufficient. Others will feel they must have the miniature golf course, the horse-back riding stable, a riding ring and miles of trails, the paddle boats, the cabins they can rent when the weather turns cold or rainy. Some will indicate that your operation is a failure if you do not provide some sort of pavillion for square dancing, youth programs, and group entertainment. You can invest many thousands of your dollars in providing water to each campsite, electrical hookups, the automatic washer and drier, the sanitary station for the self-contained trailers, the complete camping store with all the necessities, and the gimcracks you can place on the shelves. Somewhere there is a happy medium that should be reached in serving a fickle public. However, to sit back at a desk surrounded by four walls pouring out air conditioning, canned music, and telephone signals, or even to stand at a podium

Shedd Family Camping Near the White Water River, Sumter National Forest, South Carolina.



U.S. Forest Service Photo

and spout off about what you should have and must have in order to conduct a successful operation could be folly. The resource you have and the people who will use it must be your guides. There are too many variables in areas, operators, and demands to come up with the one set of answers to dictate every item necessary for every family campground operator.

Speaking of the campground operator, who should he be? What type of an individual—with what background? Should he be a folksy yarn spinner, a jack of all trades? Does he need to be a business man? There is a very interesting folder written by Ira B. Lykes of the National Park Service, and the Editor of TRENDS, for the Family Camping Federation entitled "So—You Want to Be a Campground Operator!" It asks 7 important questions:

1. Do you have the right site to develop a campground?
2. Are you looking for the "fast buck?"
3. Are you a camper yourself?
4. Do you have the kind of personality that would appeal to campers?
5. Do you have funds available for campground development and operation until it starts to pay off?
6. Are you familiar with and prepared to meet at least minimum standards for campground health, safety and sanitation?
7. Do you have enough space available for future expansion?

Once you have answered these questions and still desire to follow through on your development project, your work has just begun. The man or woman who decides that he or she likes camping, that a little piece of land they have seen advertised is just what they need to be in the camping business, have so very much to learn. Our correspondence in the Southeast Regional Office of the Bureau of Outdoor Recreation, coupled with much of that I see from time to time when visiting in Washington, continually plays the record that the entrepreneur thought that it would be a simple matter to clear a little land, set in a few picnic tables, perhaps a privy to start, drill a well, stick up a few signs, then tell friends and camping clubs, and he would be overrun. It just doesn't work this way. The costs are so much greater than anyone ever figured. Better than 50% of your investment is going to be in land or on the ground in the form of water, sewage lines, and roads. Some of the public agencies well established in the camping area business figure their unit costs average out to better than \$1,500 per site. Granted that this may be more than you had in mind, yet surveys of successful operations (and by the use of the word successful I mean those returning a gross profit) show that capitalization for adequate development is essential. The New York State Cooperative Extension Service did a business management survey on campgrounds and found an average investment of \$422 per site. Their study showed an average loss on the 10 to 20 site campgrounds but an average gain of \$4,290 for operations with 65 to 300 sites. Another important index was that those campgrounds with more than 50 sites and having competing enterprises within 10 miles showed a greater profit (\$5,295 versus \$1,350) over those campgrounds with no local competition.

This brings me to a trend which I believe you will be seeing more and more as our years of activity in this field increase. That is the recreation complex—the large scale operation offering a variety of activities—the recreation area which includes family camping, the rental of

Cumberland - Big South Fork



NPS Photo

cabins, boating, swimming, and tied in with any number of forms of outdoor recreation. You have some examples of area development complexes in North Carolina, in the Great Smoky Mountains National Park area at Cherokee, the Grandfather Mountain, Maggie Valley locales, the eastern shore North Carolina area. Together you may be able to sustain yourselves and grow. Divided into many small units scattered throughout the land, will you be able to attract visitors in sufficient quantity to make it worth your investment of capital and time and labor? In Georgia the Lake Lanier story is one that continues to unfold. Attendance at this lake is recorded at more than 8 1/4 million in 1964. There are a number of sizeable projects on the planning boards. Surely many of your locations are in close proximity to natural area attractions. Capitalize on your location and the attraction, but do it all within your ability to handle the natural resource in a wise and judicious manner. If the resource is exploited and ruined what have you left to work for you? It is of paramount importance that the campground operator become a wise steward of his land, the lands which will serve his patrons.

This matter of capitalizing on your assets is a subject for special treatment. Let me make some suggestions in areas

Father and Son Camp and Fish on the Buffalo River



U.S. Forest Service Photo

you could consider. The family camper, once satisfied with a place to set up his tent or park his trailer, assured that he has the needed supporting facilities of sanitation, water, parking, and reasonable privacy, will be ready to repeat his stay with you and encourage his friends when you, the operator, begin to show him what activities he may enter into while occupying your campsite. Whether he knows it or not he came to involve himself in the natural environment. Helping him do this is up to you. A map of the area showing him where he is in relation to historical, cultural, archeological, natural history, and other areas or interesting activities will encourage a prolonged stay. Your campground may be the camper's bedroom while he explores interests outside of your area. On the other hand you may have attractions of your own. For example, a nature trail, simple but direct and correct, may provide Mr. and Mrs. Camper and their family an insight to what surrounds them in the outdoors and where they fit into the picture. You will not be able to please everyone for there is always one who is unwilling to walk 50 yards for water and who doesn't like the idea that he can't let his dog run free through everyone else's campsite. For the most part, campers are not looking for too many things, but they do need guidance in how to enjoy what is there.

Where and to whom can you look to find some of the vital assistance you will need in developing your camping area to attract the camping market? I believe one of the best tools currently available is the Family Camping Federation, a subsidiary, if you will, of the American Camping Association. This organization, founded on the principle of serving the family camping leaders of the country, is still growing and striving hard to serve the vast field of interest in family camping. Recently the National Committee of the FCF met at the Schiff Scout Reservation in New Jersey to consider many of their problems—not only problems of a fledgling organization but problems of growth and service in the field of camping interest. Among items considered was the National Family Camping Consultation to be held in conjunction with the American Camping Association National Convention in Chicago, March 8-12, 1966. One of the best things that FCF has done to date is to produce a periodic newsletter "The LEADER." This publication, compiled and edited by my good wife Edith, is issued 6 times a year and carries a complete rundown on many of the problems being faced. A recent article was "The Total Experience" also written by TRENDS Editor Ira B. Lykes, which covered some of the same points I have mentioned this afternoon. There are other sources of help, too.

This has been a very rapid, superficial overview of family camping. It is a fascinating form of outdoor recreation. It can be, and should be, a rewarding form of business. In a society filled with multiple opportunities for appreciation of the finer things in life, conservation and natural beauty have become the watchwords. If you go about the business of developing family camping areas keep the matter of conservation in the forefront of your thinking. Look at it as expressed by John C. Caldwell:

"A wise conservation program should strike a balance between our needs of today and the needs of tomorrow. This does not mean that we are not to touch existing resources and are to leave them for future generations; but it does mean that unwise use and needless waste should be avoided, that every effort should be made to obtain the maximum benefits from the use of all our natural resources for the greatest number of people—now living or yet to live."

Presented at the Outdoor Recreation Seminar, Montana State University, Bozeman, on October 10, 1965. Also being published in THE MONTANA OUTFITTER.



QUALITY IN OUTDOOR RECREATION

by J. ALAN WAGAR •

Most of us are convinced that outdoor recreation is big and getting bigger. Recreational visits are now counted in astronomical numbers, and projections indicate that this is only the beginning. We have more campsites, boat harbors, ski lifts, and other facilities than ever before. In fact, we've grown to expect the yearly escalation of all statistics on recreation—number of visits, dollars spent, and miles driven or flown. However, most of these statistics deal only with quantity. They tell us very little about how good all this recreation is. And unless we consciously work toward quality, we may achieve only substandard recreation for everyone—"guaranteed mediocrity," as one person aptly expressed it.

What is quality in outdoor recreation?

Most of us can define it for ourselves, and some of us even think we have the revealed truth for everyone. However, when our backgrounds and training differ, we're amazed at other people's stupidity (but not our own). Quality seems to be a highly personal matter. However, even if we can't agree among ourselves, policy makers and land administrators must make decisions that affect the quality of our recreation. It's desirable that they decide in favor of high

Many experiences offer quality in outdoor recreation.



quality instead of low quality. But if quality is such a subjective matter, how are they to do it?

In outlining an approach to the problem, I have attempted to do two things: (1) Build a logically consistent framework that will guide us to quality recreation for other people, not just for ourselves or those who think the same way we do, and (2) Show how this framework can be translated into land-management decisions. This approach depends on three premises.

The first premise is that the sole purpose of all land management is to provide benefits for people. This statement is more inclusive than it may at first appear. For example, some people believe that rare species, such as whooping cranes, have a "right to live" and should be perpetuated. The premise defends the same action but for a different reason. If people like to see whooping cranes, or just know they might see them, then it is desirable to keep some cranes, for the benefit of people rather than birds. Also, the premise has the advantage of covering such nonliving items as cave formations, hot springs, glaciers, and scenery. We can justify these things simply because people want them enough to forego whatever must be sacrificed

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to have them. As another example, some people think we have a "responsibility to our resources." The premise says we have a responsibility to future generations of people rather than to resources. It still argues for taking care of resources, but only because future generations are likely to be dependent upon them.

A second premise is that recreation, like all other human behavior, is motivated by needs. Some of these needs are physiological and almost absolute, such as needs for water, oxygen, food, and protection from various threats. Most if not all other needs are learned, and even our response to physiological needs is greatly modified by culture and training. In some cultures, for example, it is extremely embarrassing to be seen eating.

Because most of our needs are learned, they can include almost anything. For example, many people develop a need for a new car in the fall when the new models come out. The need may have little to do with survival and perhaps little to do with transportation. Nevertheless, it can be a powerful force in motivating behavior.

The third premise is that the quality of recreation depends on how well it satisfies the needs that motivate it. An experience that thoroughly satisfies many needs will have higher quality than an experience that only partly satisfies a few needs. At this point you might well ask if I haven't backed myself into a corner. If most needs are learned and therefore have no apparent limit, how can we come to grips with the matter of quality?

The key lies in grouping needs into categories that seem to explain most outdoor recreation in the society we're dealing with. This is a rather rough and ready way to approach human psychology, but at the moment we seem to have no better tools for this particular task. Ten categories of needs cover most outdoor recreation in American society.¹ These are:

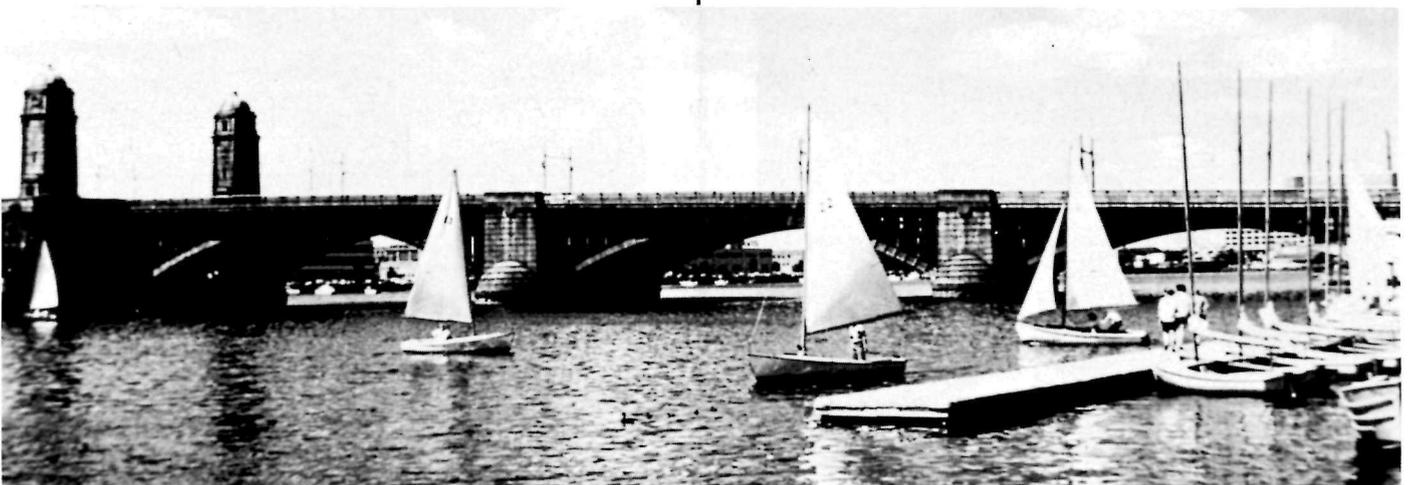
EXERCISE
HEALTHFUL ENVIRONMENT
SELF-ESTEEM AND SOCIAL PRESTIGE
ESTHETIC ENJOYMENT
UNDERSTANDING
FREEDOM OF CHOICE
EARLY TRADITIONS AND CONDITIONS
SELF RELIANCE
CHANGE AND ESCAPE
COMPANIONSHIP

So far I've dealt only with the human side of quality. We still have to translate this into land-management decisions that will assure people of high-quality recreation experiences.

If we start with the broad level of overall planning, perhaps the first step is to recognize the desirability of providing a wide variety of opportunities. Our objective is to provide benefit, and this comes about only through the satisfaction of needs. However, since most needs are learned and are highly personal, we must provide for many different needs. To do this, we must think in terms of recreation complexes with a variety of opportunities. Thus, resorts in outdoor settings can provide many persons with meaningful outdoor experiences while assuring them of the security and comfort they are accustomed to. Resorts might easily meet needs from the categories of healthful environment, esthetic enjoyment, change and escape, and companionship. On the other hand, some people would rather walk or ride into wilderness areas in search of out-of-the-ordinary experiences. These visitors might be more strongly motivated by needs from such categories as exercise, self-esteem and social prestige, freedom of choice, early traditions and conditions, and self-reliance. To provide a variety of opportunities, we need resorts, wilderness, and many other facilities between these extremes.

The logic of providing a range of opportunities is easily graphed (fig. 1). People's desires can be arrayed along any of a number of different dimensions. In this case I've chosen elaborateness of facilities for camping. Some campers want them simple; others want them elaborate (fig. 1-A). If, for administrative simplicity or other reasons, we provided all facilities for the average desire, we would miss most people's desires by the amount shown in shading (fig. 1-B). However, by offering just a few different opportunities we could greatly reduce the amount by which most people's desires are missed (fig. 1-C). Although I've used elaborateness of facilities for illustration, people's desires could just as well be arrayed along dimensions of naturalness, social pleasantness, solitude, beauty, challenge, or any other factor that is important in their recreation.

¹Wagar, J. Alan. The carrying capacity of wild lands for recreation. Forest Science Monograph 7, 24 pp., illus. 1964.



Quality can be good companionship at high-density recreation areas.

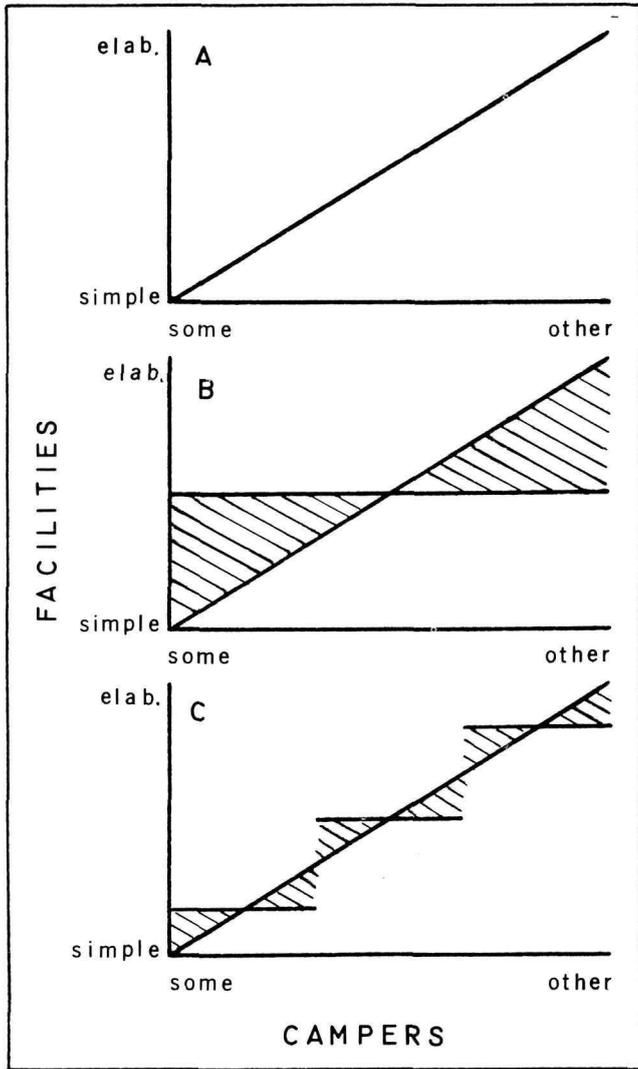


FIGURE 1. (A) Some campers want simple facilities while others want more elaborate facilities. (B) If all facilities are aimed at the average desire, the wishes of most people will be missed by the amount shown in shading. (C) However, if just a few different opportunities are provided, the amount by which most people's desires are missed can be greatly reduced.

In planning a recreation complex, a good approach would be to list the kinds of recreational opportunities that seem to be needed and then to see where you can fit them in. Too often, those of us trained in land management tend to plan area by area instead of opportunity by opportunity. If we see a flat spot we're likely to convince ourselves it will make a fine campground when a visitor center or golf course may be the thing that's really needed. It isn't nearly so important to use a specific area for a specific purpose as it is to insure that a needed opportunity is included somewhere in the total scheme of things. Many recreation sites are still planned in a vacuum without reference to other areas.

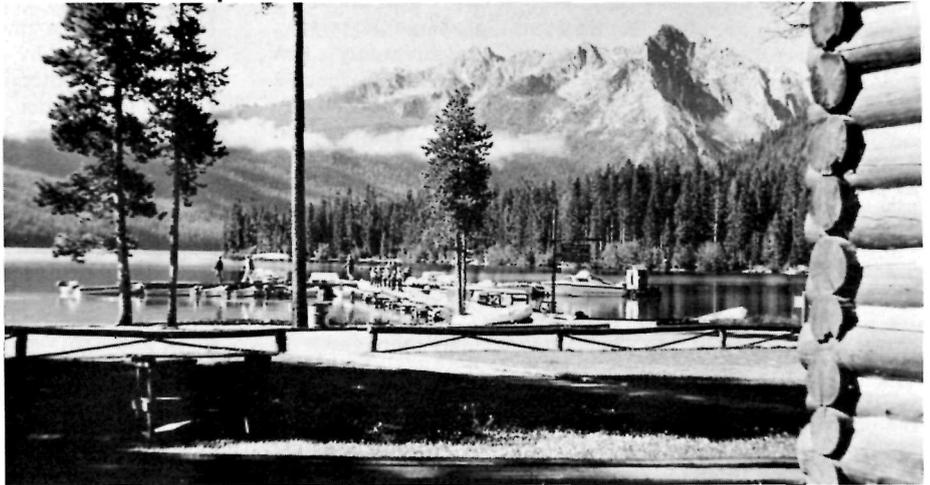
Zoning can be an essential part of planning for quality in a recreation complex. Otherwise, people with different interests will spoil each other's experiences. Fishermen and water skiers illustrate the point. Sometimes they can be separated in space by giving one area to fishermen and another to water skiers. They can also be separated in time. In some areas, water skiing is permitted only between 10:00 in the morning and 4:00 in the afternoon, giving fishermen the early morning and late afternoon when fishing is better anyhow. Zoning can also insure Granny of an opportunity to see some of the world's most spectacular scenery from her automobile, without eliminating all the wild places that other people might want to see afoot.

When we move from overall planning to the consideration of individual areas, one of our major concerns is the dynamic character of many recreation resources. Baseball diamonds and basketball floors can be taken as fixed objects, but the living communities on which many recreations are based are subject to drastic change. Take fishing for example. By hiking 10 miles from the road, a fisherman might find a beautiful lake full of 20-inch trout. Maybe he decides this is wonderful fishing but too far to walk. "There ought to be a road." So, lots of people can now drive to the lake. Maybe things don't change much the first year. But the dynamics of the situation will soon show up.

When fishermen were few, their rate of exploitation did not exceed the capacity of the lake to replenish itself. And for awhile, many fishermen could share in removing the accumulation of many years. It's just like a bank account. It holds up as long as you take only the interest. But when you start digging into the capital, your account starts toward zero. In similar fashion, you can soon run out of big fish or other recreation attractions.



Quality can be solitude, beauty, and inspiration.



Resorts can meet needs for healthful environment, esthetic enjoyment, change and escape, and companionship.

This virtually summarizes the history of outdoor recreation in this country. Our attitudes toward it were formed when there weren't enough people to overtax the rate of replenishment, or before it became obvious that our capital was in danger. Now, however, we have more people with more money, more cars, and more time seeking what tradition, Chambers of Commerce, and advertisers of outdoor equipment say is "the good life." With growing numbers of people on a shrinking area of recreation land, it will require increasing amounts of management to maintain quality.



For a variety of opportunities, we need high-density recreation, wilderness, and many things in between.

Several management approaches are usually possible. For example, if we want to manage a few places for big fish, we can go about it in several different ways. One way is to make people walk 10 miles for them. This will usually keep fishing pressure down and maintain high-quality fishing for the few who walk the distance. A second procedure would be to put a limit on how many fish are caught or how many people fish for them. The number of licenses sold for some game animals is often limited, and in some waterfowl shooting areas each hunter is permitted to enter only a few times per season. Another approach is to provide alternative fishing areas, so some of the pressure is siphoned off. Again there is a counterpart in game management, and some western states can flow hunting pressure from place to place by opening seasons at different times in different zones or by offering such attractions as two deer per license or either-sex hunts. Still another approach is to raise hatchery fish to large sizes and then release them, or even let people fish for them right in the hatchery runs. We can even throw the whole burden over to private enterprise and let people fish where they can buy their catch by the pound or inch. My own background and biases make some of these alternatives less appealing than others, but the point is that many patterns of management are possible.

For many recreation areas, management must include facilities. This is especially true where use is heavy. If too

many feet would destroy the vegetation, we can simply divide the area into "the part people occupy and the part that they look at," using paved surfaces, barriers, and plantings, as needed.² In some situations this even increases the quality of experience, as in swamps, caves, or other situations where people would easily destroy attractions if forced to move about without the help of trails or other facilities.

When we use facilities it costs money, and this runs headlong into another tradition that has grown about recreation in this country. We think of it as free. This made sense when there were few people to get in each other's way and when the only cost of outdoor recreation was the cost of getting there. Now, however, when people expect flush toilets, hot showers, laundry facilities, and electricity, recreation areas are costly. Yet some folks can demand all these things, look you straight in the eye, and tell you it ought to be free. Although it ran into a bit of difficulty in its first year, we now have the Land and Water Conservation Fund, and charges for recreation will probably become increasingly prevalent.

This may solve a lot of problems by forcing people to decide if they really want a recreational experience enough to pay the costs, rather than shift them to taxpayers, including the ones who don't benefit. It's a bit like wanting a Cadillac but deciding on a Chevrolet after visiting your banker. One danger in pay-as-you-go recreation programs is that marketplace evaluations are short-run evaluations. By using any discount rate and a sufficiently long period of time, we can bring any future value very close to zero. Because our responsibility extends to future as well as present generations, we'll need to make some uneconomic decisions for such things as scenery and space.

A final point with tremendous implications for quality is interpretation. As Aldo Leopold wrote, "To promote perception is the only truly creative part of recreation engineering."³ Through interpretation we can make each person's recreational experiences more meaningful and can make major attractions out of what seem to be very ordinary places. For example, in testing the effectiveness of interpretive techniques, one of our graduate students told 24 classes of school children about trilobites and cephalopods, obscure fossils to most of us. However, the children became fascinated. By using nature trails, exhibits, slide presentations, talks, and other means of interpretation, we could provide a high-quality recreational experience almost anywhere.

In summary, quality is a human concept based on highly subjective criteria. It depends on the satisfaction of needs, which are mostly learned and therefore extremely varied. However, by using a few categories of needs, we can fairly well predict what people are likely to want. The important thing is not to expect everyone to want the same type of recreational opportunity. By providing a variety of opportunities, zoning, managing the areas, and interpreting the attractions, we should be able to provide benefits from recreation from now on.

2/Hutchison, S. Blair. Recreation opportunities and problems in the national forests of the Northern and Intermountain Regions, U.S. Forest Service. Intermountain Forest & Range Expt. Sta. Research Paper 66, 33 pp., illus. 1962.

3/Leopold, Aldo. A Sand County almanac; and sketches here and there. Oxford Univ. Press. New York. 226 pp. 1949.

“ AMERICA THE BEAUTIFUL ”

by the HONORABLE RUSSELL E. TRAIN ●



The theme of this conference and the subject of these remarks—“America the Beautiful”—is surely a concept which inspires and challenges the imagination, one which is fully in keeping with the grandeur of our surroundings here in the Grand Tetons. The fact that it is our theme, that the very idea of beauty should suddenly have become an accepted goal of national policy—this is a matter of very special significance.

It may—and I emphasize the word “may”—mark the beginning of a new awareness of their environment on the part of the American people and of effective action for the improvement of the environment.

The President’s Message on Natural Beauty, the White House Conference on Natural Beauty, follow-up state conferences, meetings such as this, and most especially the leadership, interest and deep personal commitment of Mrs. Johnson have created a truly extraordinary opportunity for constructive conservation accomplishment.

However, let us clearly understand the nature of this opportunity and our role in it.

Messages and conferences and themes are no substitutes for action. They are vital initiatives, but they are not action. Despite the theme of this meeting, America will be no more beautiful the day we leave than it was the day we came here. In the concept of “natural beauty” we have been handed a magnificent banner around which to rally and under which to march. Where we go with that banner—indeed, whether we go anywhere at all—that is up to us.

Keynote address at the annual meeting of the American Forestry Association held jointly with the National Council of State Garden Clubs, Jackson Lake Lodge, Grand Teton National Park, Wyoming, September 6, 1965

Since “natural beauty” is now a major national goal, I am going to direct my remarks primarily to a consideration of what that term does and can mean, realizing at the same time that beauty is necessarily subjective and will mean different things to different people—even different things at different times.

There has been criticism of the concept of “natural beauty” as implying a so-called “cosmetic” approach to conservation. Nothing can be further from the truth. No one could read the President’s Message to Congress and not be aware that here was expressed a deep concern for the quality of the total environment. Likewise, the discussions and the recommendations of the White House Conference on Natural Beauty considered the problem of the American environment in breadth and in depth.

In any event, there is no basis for scorning relatively small efforts toward beautification. The planting of flowers to brighten the heart of a city may not accomplish an environmental revolution, but it may well lead to a new awareness of their surroundings on the part of many members of the public. This can be an important beginning. After all, conservation in the broad sense is not so much a specific program as it is an attitude toward one’s environment, a way of looking at and living in the world around us—and deeply caring about it. Flowers can lead to trees, and trees to public parks, and parks to comprehensive planning programs. The very scope of such activities, from the small and relatively superficial to the comprehensive and deeply significant, means that there is room for all in this effort. Every citizen can become involved, and every citizen can be benefited.

● A native of Washington, D.C., Russell E. Train is a graduate of St. Albans School and received an A.B. degree from Princeton University in 1941. He served as a Major in the field artillery from 1941 to 1946, and in 1947 received his LL.B. degree from Columbia University.

Admitted to the District of Columbia bar in 1947, he served as an attorney on the staff, Joint Committee on Internal Revenue Taxation, U.S. Congress from 1948 to 1953, as Clerk of the House Ways and Means Committee from 1953 to 1956, and as assistant to the Secretary of the Treasury from 1956 to 1957 when he was appointed by President Eisenhower to the Tax Court of the United States. He resigned the appointment on August 1, 1965 to accept the Presidency of the Conservation Foundation.

Mr. Train’s many associations with conservation and wildlife organizations both at home and abroad include: The Conservation Foundation; Trustee, World Wildlife Fund; Trustee and President, African Wildlife Leadership Foundation; Director, American Committee for International Wildlife Protection; Honorary Trustee, Tanzania National Parks; Trustee, American Conservation Association, and numerous others.

The conservation movement has seemed to many to be limited to relatively small groups representing rather specialized interests. Now, today, the goal of natural beauty is helping to change this. Men and women who never had the foggiest notion of what conservation was all about have found in natural beauty something they can understand, something they can come to grips with, and something which they care about, for themselves and for their children. Just as the hunters and fishermen of the nation, among others, have lent real grass-roots strength to the conservation movement over the years, now the cause of natural beauty is broadening the conservation movement still further. Conservation is being placed where it belongs—in the hands of all the people.

It is imperative, therefore, that conservationists embrace the goal of natural beauty and welcome the new believers it has brought to our common cause.

It is equally imperative that we seek the full meaning and significance of this concept and then articulate it as a guide to action. And, ladies and gentlemen, it is time for action. When I read as I did recently that visitors to Niagara Falls can now stand on the American shore and watch the garbage going over the falls, I say to you "The honeymoon is over! It is time to go to work!"

A basic quality of beauty lies in unity of form and function, in a fundamental harmony of the whole. Taken in combination with word "natural," I believe this quality provides the key to our search for the meaning of the phrase.

We tend to conceive of man and nature as separate entities. We talk of nature as if we could take it or leave it, as if a concern with nature were simply a matter of individual choice. Nothing could be further from the truth. Like it or not, man and nature are inseparable parts of a unified whole. Man is part of the natural world, fully dependent upon its other constituent parts and their interactions.

Yet, obvious as this seems, the idea of the unity of man and nature is foreign to our western tradition, including even our religious training. Our entire culture teaches us that man is dominant, that nature is his servant, that the world was created for man's exploitation and enjoyment. The consequences of such philosophy confront us on every hand—from the filth of our rivers to the callous annihilation of other forms of life on earth.

The superiority of man over nature and his independence from nature—this is no easy tradition to change. Yet change it we must, or we shall fail in our search for natural beauty, for fundamental quality in our environment.

Recognizing this essential, inescapable unity of man and nature, our goal must be to achieve a harmonious working relationship between the two, a creative, productive harmony between the works of man and the works of nature. Therein lies true natural beauty, and, in that phrase, so described, we possess a clear conceptual basis for positive action programs to protect and improve our environment. You will note that I have included both the protective and the creative in that statement.

Physical man is sustained and nourished by the natural world and its processes. You and I know that the spirit of man likewise finds sustenance and inspiration in that world. This essential dependence of man on nature being true, it is folly and stupidity for man to destroy, to interfere with, or deface any part of the natural world without compelling reasons. An environment defiled by pollution, by the destruction of species, and by the proliferation of urban sprawl is a discordant environment, the very antithesis of natural beauty. Such acts and conditions are not just unpleasant. They strike at the very roots of man.

Now note that I have not said that nature should be inviolate. I do not suggest that we turn the earth into some sort of nature preserve. Far from it. Technological man is here to stay, and he is here to stay not as an invader, not as something alien, but as an integral part of an evolving world. What I do suggest is, first, that we put a stop to the kind of planless, mindless destruction of nature that one sees at every hand; second, that before we take action to modify the natural world, we should understand the long range effects of what we are doing, as well as the alternative choices of action which are available to us; and third, when we undertake development projects, whether in building a new road, laying out a new subdivision, creating a new city, or even undertaking some large-scale economic development program abroad, that we make a determined effort to protect natural features and processes and to incorporate them as integral parts of the development plan.

So described, the concept of natural beauty projects an image of national purpose whose magnitude takes one's breath away! It clearly fits the insistence of President Johnson in his Message on Natural Beauty that "Our conservation must not be just the classic conservation of protection and development, but a creative conservation of restoration and innovation." Under the broad umbrella of such a concept of harmony between man and nature, we find the logical basis for programs that range from litter prevention and roadside quality to regional development planning and from wildlife and wildland preservation to the re-creation of urban environments.

The goal of bringing man and nature into productive harmony gives us new criteria and new insights for the examination of long-established programs such as are represented by our national parks and national forests. In large part, our national parks today comprise spectacular natural areas. It is right that such areas should be preserved in this fashion. However, this concept of a national park arose in a day when the great majority of the American people still had roots in the land, still retained familiarity with the natural world. The common-places of nature were taken for granted, and it was, in large part, only the great spectacles of nature that excited the public interest. Today, ever-increasing percentages of our people are urbanized, with little or no exposure to the outdoors. Today, I suspect that a child from the streets of Harlem might find wonder and spectacle enough in the unfolding of a leaf. Perhaps we should create a new sort of national park within urban areas themselves; again, perhaps outstanding examples of rural landscapes should be given a type of nationally-protected status which would at the same time permit continuation of their basic agricultural function.

Indeed, what is critically needed in many areas is not so much acquisition and special status as simply reasonable protection against further development and an assurance of continued present use. If I may be permitted the role of special pleader for a moment, I would like to cite one example of what I mean. I sail a boat on Chesapeake Bay. As is the case with many others in the cruising fraternity, I know few boating pleasures greater than dropping anchor at the end of the day in a quiet unspoiled creek surrounded by the trees and fields of a rural landscape. This is a pleasure, however, which is rapidly becoming non-existent as available shorelines become crowded with houses, marinas, and pizza palaces. It would be a wonderful thing, if, through acquisition of easements and development rights, the increasing number of boating enthusiasts could be assured of uncluttered anchorages at strategic locations along our coastal and inland waterways.

Nor do I believe that we should look entirely to government for such programs. Many individual landowners, either alone or in association with others, would welcome the opportunity to exercise private initiatives in this regard, given practical legal techniques and fair tax treatment. I am convinced that the whole area of private conservation initiatives should be given much more emphasis and much more study.

The present multiple-use management of our great national forests finds ready endorsement in the concept of harmony between man and nature, drawing therefrom new support for research, education, and outdoor recreation values. Moreover, our forests, our parks, and similar areas must not be treated as isolated reserves, but as integral parts of the complex economic, social, and ecological relationships of much larger regions. Even in public education, an interpretive program in a national park, for example, should be concerned not only with providing facts about the park itself, but with providing visitors with a new awareness and concern for their own home surroundings, whether Los Angeles or New York, or points in between.

Outdoor recreation becomes a vital part of our effort to build a creative relationship between man and nature. Pleasurable and instructive experience in the out-of-doors on a regular basis should be part of our everyday life. At the same time, our quest for harmony between man and nature demands that we take a critical look at recreation patterns and particular recreation practices. An activity is not necessarily good and desirable just because carried on outdoors during leisure time. Some forms of outdoor recreation can be ruinously exploitive and destructive of the very natural values which we seek to preserve and enhance, and with which we should seek to enrich our lives. Thus, rather than arbitrarily basing outdoor recreation programs and facilities on projections of existing patterns of activity, we should also give consideration to redirecting certain recreation preferences and to creating new opportunities and instilling new interests. Here is a fruitful area for research.

Particularly, because of the growing public pressures on outdoor recreation facilities, we should place emphasis on developing new recreation resources close to home, even in our own back yards, through both public and private investment.

There is considerable discussion of scenic highways today, but I believe we must approach the proposal with great care. No matter how designed, a highway alters the natural landscape radically, and, according to the qualifications I have set out above, such alterations should be made only when really necessary and then only with a minimum of interference with natural values. I have no doubt that scenic roads are appropriate under a variety of circumstances. Certainly, a highway can be necessary in a national park but it is incumbent upon the highway planner to give a higher priority to maintaining the natural quality of the area than to increasing the number and speed of the vehicles accommodated at the expense of that quality. I am not opposed to scenic highways as such, but I have a strong feeling that the real function of highways is to move people and goods from one place to another with speed and economy rather than unnecessarily to expose the landscape. I suspect that I may be more practically concerned by the fact that programs centered on the construction of physical facilities inevitably come under increasing pressures that relate more closely to the distribution of economic benefits than to the realization of the values supposedly being sought.

However, let me say that the highways this nation must

have to meet the essential needs of our society may represent a dramatic opportunity for creative effort to make the natural environment available and familiar to the largest possible number of people in the areas of greatest need. Let us adapt the concept of multiple use to our public highways. In addition, to carrying goods and people, let us make their rights of way a resource for outdoor recreation, for open space preservation, for wildlife habitat, and for education of the public in those values we are discussing here.

Considering the billions of dollars being poured into the interstate highway system, it would seem the part of wisdom to turn our highways to as many advantages as possible. It is doubtful whether any other single activity of our civilization has as much impact upon the natural landscape, mostly adverse. Yet, let us suppose that, instead of rights-of-way measured in hundreds of feet, they became measured, where practical, in thousands of feet, that a protected landscape extended for perhaps a mile on either side of an interstate highway. Let us suppose that, in addition to the service areas that are now commonplace along our limited access highways, similar areas were provided for the seeker after outdoor recreation and natural beauty. Let us suppose further that highways were paralleled with systems of footpaths, bicycle paths, and even bridle paths, with trails to natural features, with picnic grounds and even camp sites. Prime agricultural land could be protected as such. Communities along the edge of such areas would have direct access to them and, indeed, their greatest value could well lie, not in their use by the interstate traveller, but as a natural resource for local peoples and communities. The possibilities of such a program stagger the imagination. Instead of highways representing technology at war with nature, they would become cores of ribbons of green that might comprise an Interstate System of Outdoor Areas, linking community with community, urban area with urban area, people with people. Here, indeed, would be an imaginative effort to bring the works of man and of nature into harmony, calling for new concepts in highway design as well as in conservation, posing new challenges to the regional and metropolitan planner, resulting in a creative marriage of technology and ecology.

Now let me say that I am not so interested here in "selling" a specific program (particularly one which is transparently but the skeleton of an idea) as I am in conveying a sense, not only of the urgent necessity for conservationists and ecologists becoming involved in the planning and development process at every level, but also in providing a glimpse of the potential for accomplishment that is inherent in such involvement. We could look forward to the creation of towns and cities where valleys and streams, fields and forests, pleasant paths and similar features are an integral part of the urban fabric. Perhaps our greatest challenge is to design and produce a practical interrelation of the values of the natural environment with the values of diversity, cultural stimulation, and creative human communication traditionally offered by the urban environment.

If man is to live and work and human society to evolve in harmony with the natural world, a thesis which I have set out as reflecting the true meaning of "natural beauty" and constituting the central goal of modern conservation, then we can no longer afford to push aside the viewpoint of the conservationist and the knowledge of the ecologist as somehow being irrelevant to development and that often illusory goal "progress."

Let it be absolutely clear that ecological principles are of vital, practical importance to development. We have

created dust-bowls by our failure to apply those principles. We have subjected cities and towns to flood disaster, to loss of life and property, by building on flood plains rather than reserving such areas for open space or agriculture. We have filled swamps and marshland for construction or as dumps for the refuse of our society, in complete disregard not only of their natural beauty, but also of their roles as natural reservoirs, water regulators, and wildlife havens. Indeed, we create whole communities in disregard of the most rudimentary principles of hydrology and then, when the water runs out or runs over, blame nature and call upon the government for disaster aid.

There is a serious water crisis in the northeast today but the problem is not really due to a shortage of water but to a shortage of planning. We know a great deal today about natural resource management. It is high time that we apply that knowledge to the urban environment and to regional planning.

I give the highest priority to the identification and articulation of ecological principles as they relate and apply to practical development programs. There is no doubt that we still have much to learn in this regard. We need major and continuing research such as is being proposed by the International Biological Program to investigate the productivity of representative terrestrial and aquatic communities. Such programs have major long-term significance to the capacity of man to sustain himself on earth, and they deserve substantial support by governments and private institutions. However, we do not have to await further research before putting ecological principles to work. We have a tremendous store of knowledge now that simply needs expressing in forms that are usable by economists, engineers, landscape architects, and planners generally, and which are relevant to their concerns.

There must be mutual understanding and a continuing dialogue between all of these disciplines. A useful exchange along these lines was sponsored by The Conservation Foundation last spring when it conducted a four-day conference on the subject "The Future Environments of North America" which brought together some forty leading ecologists, economists, geographers, regional planners, urban planners, etc., from the United States, Canada, Latin America, and England.

This is not to assert that conservation values or ecological principles, however we describe them, should become the overriding determinants of policy. What we should aim for is to make such values a respected part of the decision-making process, to have them weighed in the balance along with economic and other criteria. At the present time, they are largely overlooked so that alternatives supported by ecological standards are simply not made available to decision-makers.

I do not for a moment mean to imply that ecology is necessarily at war with economics, that the one is always a clear alternative to the other. Clearly, this is not so. While I seriously doubt that we can ever put meaningful dollar values on such things as the survival of a species, a delightful landscape, the rise of a trout to the fly, the song of a bird, or the stillness of a forest, there are many cases where the application of ecological principles makes absolute economic good sense. I have already mentioned some of the costly results of failing to apply those principles. On the positive side, we all are familiar with the real dollar values implicit in sound forest management, range management, and wildlife management. There are many more. In large-scale real estate development, I am convinced that a plan that makes proper provision for open space, that protects hill-

sides from erosion, and streams from siltation and pollution will, over the long run, produce property values that are substantially higher and more stable than one which simply exploits the land for the highest immediate cash gain.

Just as in the life insurance industry good health is recognized as good business, so I believe that American industry generally will and must come to recognize that a good environment is also good business.

When the achievement of natural beauty, conservation, and ecological harmony does impose an additional economic cost, the public should not necessarily reject these values. I read a newspaper column recently which strongly implied that efforts to put overhead transmission lines underground should be rejected because the cost of power would be increased, and that industry should not be required to prevent or reduce stream pollution because the cost of manufactured goods would rise. Following this approach, child labor would never have been abolished nor a thousand other improvements in our way of life achieved.

When conservation values mean added costs, we should acknowledge this frankly, estimate the costs as accurately as possible, and provide the public and decision-makers with the facts necessary to making intelligent choices from among the available alternatives. Conservationists should aspire to no greater role in a free society, but this is a role to which they are surely entitled.

I propose that the President establish a Council of Ecological Advisors, or alternatively, an interdisciplinary group of environmental advisors having a strong ecological orientation. And let me make it clear that I am not just talking about an interdepartmental committee. With one such bold stroke, concern for the quality of the environment would be given an important new status in planning and policy-making at the highest level of government. It would give ecology a new posture in public affairs, and a new sense of responsibility for making its knowledge applicable and relevant to the practical needs of our day.

I have spoken of the necessity for changing some of our traditional attitudes toward man's relationship with nature. If we are really to achieve this objective—and we must—then something more is needed than the conviction of a few determined people, although this is important. Something more is needed than government policies, although these help.

Nothing less than a revolution of our educational system is required. Our present system is built around knowledge of facts and how to do things with those facts. In this system, the world around us continues as an external affair upon which we operate successfully if we simply apply the facts we are taught. I believe that those facts and our dealings with them need to be conceived in different terms. They need to be presented so that the student sees himself as part of an interdependent, interrelating world, not simply as its manipulator.

We need to revise our teaching, not to alter the knowledge we teach, but to present the facts in the context of certain important relationships so that, as individuals, we come to understand our own place in the world around us. Stated a different way, we need to teach subjects, whether physical sciences, social sciences, humanities, or technologies, in the context, wherever possible, of man interacting with his environment.

We need to rewrite textbooks, revise entire curriculums. I am not talking about teaching conservation as a specific subject but about injecting a new concept of man's relation to his environment into the very marrow of our education system, throughout all subjects. The Conservation Founda-

tion, in cooperation with the United States Forest Service, is working in this important field at the jointly operated Pinchot Institute for Conservation Studies at Milford, Pennsylvania.

I strongly urge that the Secretary of the Department of Health, Education, and Welfare appoint a task force to make studies and submit recommendations along these lines.

A week ago today I was sitting on a sand dune on the Massachusetts shore with a care in the world—well, hardly any cares other than this speech! I watched the gulls sweeping overhead and the wind stirring the grass on the tops of the dunes and the sandpipers feeding along the edge of the sea. And as the long Atlantic waves rolled in to crest and break in a froth of spray and then run up the beach beneath me, I thought about our subject, "America the Beautiful." Watching those waves from across the sea, aware of the ebb and flow of the tides that set the pattern of life around me, it seemed to me that any vision of "America the Beautiful" which excludes the world beyond our boundaries is not very realistic.

Whether we like it or not, we cannot divide up the environment with neat little fences. The pintail duck that flies over Wyoming may have nested on the Yukon and be headed for wintering grounds in Mexico. There are now proposals to send water from Canada to Southern California. Smog and air pollution which we once thought of as the problems of particular cities have been revealed as continental in scope. Significant amounts of DDT are now regularly found in the tissue of penguins in the Antarctic. Radioactive fallout knows no political boundaries. Probably the richest storehouse of natural resources that mankind possesses lies in the oceans, common property of the world.

These are but a few examples of the plain fact that conservation and natural beauty as I have expressed these concepts cannot be the private property or the exclusive concern of any one nation or people. Whether we like it or not, we in the United States cannot ignore the environment of the rest of the world. We are part of it. We have recognized this fact in our assistance to natural resources development programs abroad. The comprehensive development program announced by President Johnson for the Mekong River basin of South Viet Nam is conservation on a truly spectacular scale. The virtually uncontrolled erosion of soils in Latin America and the progressive degradation of the human habitat in many parts of the world beyond our own borders will inevitably, if left unchecked, produce human misery and tensions which will threaten the security of this country, no matter how beautiful it is. As we sit here in these lovely and comfortable surroundings and talk about "America the Beautiful," we are indulging in dangerous self-delusion if we forget for a moment the tension, the frustration, the hopelessness, the fear, the hatred, and the violence such as recently erupted in Los Angeles. We cannot be blind to similar forces beyond our borders.

Our responsibility for natural beauty and conservation starts at home, of this we can be absolutely certain. Our immediate job lies in our own back yard, on our own street, in our own neighborhood. Nevertheless, we cannot escape our interdependence with the world environment. Indeed, we have much to learn about landscape, open space and town planning from other countries. In many of these respects, our friends from abroad are far ahead of us. By the same token, we ourselves have a great opportunity for world leadership in producing a truly liveable environment. Progress toward a beautiful America can become a beacon of hope to other peoples.

We should cooperate with the other nations of the world

in efforts to solve the common problems of our human environment. There could be few more effective bridges to international understanding.

The United States has failed to join the International Union for Conservation of Nature and Natural Resources, and this is an omission which should be speedily corrected.

The United States should propose an International Conservation Year to provide new momentum for progress directed to the quality of the environment. Each participating country would be summoned thereby to a truly national effort to achieve maximum conservation results.

Any discussion here of the environment would be pointless unless recognition is given the central significance of mere human numbers. Programs to produce a beautiful America will be meaningless unless population growth can be controlled. In the absence of such control, conservation becomes a gradually losing battle. It becomes no longer a creative effort but simply a fight to slow down the rate of environmental deterioration.

Planning for environmental quality in America must be developed in close relation to a definite population policy. There is no such policy today.

At the outset of these remarks, I stressed the fact that the establishment of conservation and natural beauty as matters of national policy gives no assurance of their accomplishment, that the achievement of these goals depends upon action by us.

Federal conservation programs and Federal legislation without citizen follow-through are simply lost opportunities.

We have a Wilderness Act which sets up a modest nucleus wilderness preservation system. But additions to that system will now have to run a gauntlet of local hearings and positive Congressional action. On these "close-to-home" issues, local economic interests can now be expected to have greatly increased influence.

We have a Land and Water Conservation Fund Act which authorizes grants-in-aid to help states plan, and acquire, and develop lands for outdoor recreation. However, as states begin to identify specific areas to be acquired, there will be growing opposition from those who have other ambitions for the areas involved.

There may soon be amendments to the Federal Water Pollution Control Act which will authorize the Secretary of Health, Education and Welfare to establish standards of water quality on interstate streams. But before the Secretary can act each state will be given two years in which to develop its own water quality criteria. We can expect, therefore, if the bill passes, a contest in each state between those who want a policy of continual upgrading of water quality and those who have—or fancy they have—a stake in protecting the status quo.

In the field of community development, the new Housing Act of 1965 strengthens a number of programs designed to improve the quality of the urban environment, and conservationists have a direct stake in such legislation.

These new programs provide weapons to help equalize the contest in specific situations. But the weapons are no good unless they are used by informed, vigorous, and well-organized citizens and public officials at the level where the battle is being fought.

I would like to see in every town and hamlet in this country a citizens' conservation council. As you know, several states have provided a legislative framework for Town Conservation Commissions. These have been particularly effective in New England where the tradition of the town meeting is still very much alive. However, there is no need to wait on such legislation, which may never come, before citizen conservationists organize at the local level.

I am not talking about a new legal entity, because it is important to work through our existing organizations. However, I am also not talking about one local conservation or citizen action group simply assuming the role I have described. The leadership of such groups should be an important part of the town conservation councils but alongside representatives of business, the press, the churches, the schools, etc. Only thus can be achieved a broad base of citizen support and citizen action. A good many years ago, Henry David Thoreau wrote:

"It would be worth the while if in each town there were a committee appointed to see that the beauty of the town received no detriment."

Let us go home and follow his advice!

National conservation organizations should increase their emphasis on leadership training for State and local officials and their own members. With the splendid example of the meeting of the National Council of State Garden Clubs so fresh before us, I hope that a wide variety of citizen organizations will hold intensive workshops on opportunities for citizen action on behalf of conservation and natural beauty. The Conservation Foundation stands ready to help in this regard. Along the same lines, the Foundation is expanding its information services to help keep citizen leaders informed on major developments in conservation and natural beauty, and on constructive ways in which citizens can contribute to conservation objectives. We would welcome suggestions that will help us make such programs of maximum benefit.

You and I should be especially concerned that current conservation programs which emphasize urban environment as much as wildlands, wildlife and traditional conservation objectives, do not flounder for want of unity of support.

For decades the leadership in conservation in the United States has come from a prophetic and vigorous core. While this leadership has often been divided between the followers of Gifford Pinchot and multiple-use and those whose principal

Recreation on Cherokee Lake



TVA Photo

interest was in preservation, its common concern has usually been on this country's great natural areas and the resources of those areas. Now we are asked to apply the vigor and the experience of the traditional conservation movement to a new set of priorities in which the urban environment gets at least equal rank. I believe that traditional conservation leaders have been remarkably responsive to this call; indeed many of the programs called for by the "new conservation" were first placed on the public agenda by those leaders and their organizations.

But some who are most concerned about making a metropolitan America liveable—perhaps in their desire to emphasize this objective—minimized the interest and potential contribution of the traditional conservationists. And a few of the conservationists have retaliated by dismissing the ardent champions of urban America as "Johnnies—come-lately."

This is a wasteful division of interest among natural allies whose resources and wisdom ought to be combined to work for the single objective of an environment of health and beauty, reaching from urban core to wildland.

Urban planners, landscape architects, and urban interests generally have much to learn from the natural resource disciplines. And conservationists have much to teach citizen leaders in urban development about techniques or citizen organization and of effective political action.

The national leaders of both professional and lay organizations interested in urban America will do well to seek out the interest and support of conservation leadership, as political allies, as technical advisors, and as members of their boards and councils.

And similarly, organizations traditionally oriented toward wildlands and rural areas can serve their interests and the public good by bringing planners, architects, landscape architects, country and city officials, and urban-oriented citizen groups, among many others, into the inner circle of the conservation movement.

One final warning: now that government is so heavily committed to conservation goals, there may be a tendency on the part of private individuals and organizations to relax and "let the government do the job." This would be fatal. Private action is absolutely imperative in order to put government programs to work. Private initiative is needed in order to produce imaginative ideas for action. We need innovation, and innovation is seldom a strength of government.

Basically, I have tried to infuse the concept of "natural beauty" with the deep and broad significance which I believe the development of a beautiful America requires and deserves. To this end, I have suggested that we look to a harmonious relationship between man and nature as the touchstone to creative conservation.

Man and his institutions and his society are evolving toward goals that we cannot now see. However, we may be certain that the environment in which we live will play a key role in that evolution, perhaps the most important.

It must be an environment that is healthy, joyful and challenging. It must be characterized by openness and diversity, because in variety of choices and in the freedom to make those choices lie the infinite possibilities of man's future.

Man will travel to the moon and the planets and probably even to the stars and beyond. But man's most immense journey lies among his fellows and within himself.

An America that is truly "America the Beautiful" can be a shining beacon to light the way along that journey.

THE CHOICE WE FACE

by RALPH A. MACMULLAN

No other Michigan wildlife resource stirs as many emotions, prompts as many arguments, or brings the Michigan Conservation Department as much mail as do deer. Deer are close to the hearts not only of hunters but also of tourists, chambers of commerce, nature lovers, school kids, barbers, saloonkeepers, farmers, just about everybody—including the Department of Conservation.

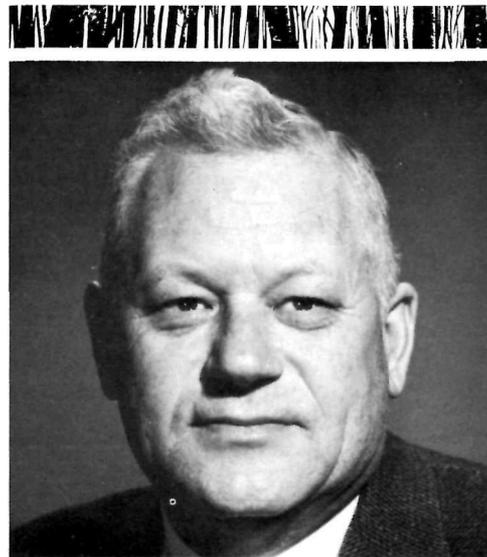
If I could have Aladdin's lamp and could summon forth the legendary genie to grant me a single wish, it would be this: I would wish that I could be transformed into a magician, complete with magic wand and tall silk hat. I would wish that I could wave, mutter abracadabra and hocus-pocus, and draw forth from the hat a couple of million more deer for Michigan—enough so that people could see them peeking out from behind every bush and 600,000 license buyers could each have one to take home.

Unfortunately, we in the Department of Conservation are neither magicians nor miracle workers. We are biologists and wildlife managers. We are scientists, and like all other scientists—be they chemists, physicists, doctors, or what have you—we operate within a framework of cold, hard facts.

The essential basic facts about Michigan deer can be summed up in two or three sentences. We don't have as many deer as we used to have. We probably are going to have fewer yet before we have more. And there is nothing practical that we can do to produce a whole lot more right now.

That's bitter medicine, I know. It's not what you want, or what we want. But the sooner we all hold our noses and swallow it, the better off we all will be. No amount of weeping and wailing, no volume of denunciations of our Department, no tinkering with the rules and regulations, no legislative edict or gubernatorial proclamation, even if every citizen of Michigan signed a petition—none of these things will add one single deer to the Michigan herd. There is no pie in the sky.

Michigan is located at the northern edge of the natural range of the white-tailed deer. Fifty miles north of the Soo, give or take a few, there aren't any deer. The moose take over.



● Dr. Ralph A. MacMullan, was appointed Director of the Michigan Department of Conservation, May 1, 1964. He succeeded Dr. Gerald E. Eddy, who resigned after serving as Director to the Department for 13 years.

Dr. MacMullan was born in Detroit, September 2, 1917. He was granted an A. B. degree in Zoology by the University of Michigan in 1939 and a Ph.D. degree in Zoology by Michigan State University in 1960.

He was with the Army Air Force from 1941 through 1946. He was a pilot of four engine aircraft and was discharged with the rank of major.

Dr. MacMullan started with the Michigan Department of Conservation in 1946, as a game biologist at the Rose Lake Wildlife Experiment Station. From 1948 to 1950, he was biologist in charge of pheasant investigations. In 1950 he was placed in charge of the Houghton Lake Wildlife Experiment Station and in 1956 became biologist in charge of game research. In 1962 he assumed the duties of Assistant Chief

of the Game Division and in 1964 he was appointed Deputy Director in charge of Staff for the Michigan Department of Conservation, until May of the year when he was appointed Director.

In 1956, Dr. MacMullan received the Wildlife Society award for authorship of "Life and Times of Michigan Pheasants," a popularized research summary of pheasant studies.

At various times, he has been the Michigan representative of the Wildlife Society; Section Chairman of the Michigan Academy of Science, Arts and Letters, He was Chairman of the Michigan Natural Resources Council for 1962 and 1963. He was the first president of Michigan Association of Conservation Ecologists, and is a member of Sigma Xi, honorary scientific fraternity.

Dr. MacMullan was appointed research associate in the Department of Natural Resources at the University of Michigan in January of 1965.

Deer are not really well adapted to a northern environment. They can survive the snow and cold and wind of northern winters only by retreating into the protective shelter of dense swamps and thickets—what we call deer yards. There they remain for an average of 90 days—more if the winter is severe, less if it's mild. Whether they survive until the spring breakup depends entirely upon one critical factor—the amount of food available in the winter yards.

A deer must have a bushel basket full of food every day to stay alive and healthy. That means every single deer we carry through the winter in Northern Michigan needs 90 or more bushels of food to sustain him. In that statistic lies the answer to why feeding deer artificially is impossible on a large scale. They just plain eat too much. And they won't stand in a bread line along plowed roads to get a handout.

Deer are fussy about what they eat. They thrive on cedar, but starve on balsam and spruce. White pine is a good deer food, red pine isn't. Aspen is pretty good, although not the best, while tag alder is worthless. Red maple is fine, other kinds of maple OK but not as good. So it goes.

The point is that there has to be enough of the right kinds of plants growing in the right places—the winter yards. All the green stuff in the world won't feed a single deer if it isn't on the animal's highly selective menu and if it isn't growing in the place where he spends the winter.

Michigan Conservation Department Photo



In springs following tough winters, we begin to find starved deer in the yards.

Even more important, the plants deer eat must be growing down near the ground, where the animals can reach them. A trophy buck may look 10 feet tall to the bug-eyed hunter trying to center his wavering rifle on the target, but the fact is that deer are not awfully big. A mature buck stands about waist-high to the average man. By rearing up on his hind legs, he can reach a little higher than your head. Any greenery growing more than seven feet off the ground might as well be on the moon as far as its deer food value is concerned.

To sum up, deer rely for winter food on a few plants growing in a few places within seven feet of the ground. Now, let's consider what's been happening to the Michigan landscape during the past century.

All of the Upper Peninsula and most of the Lower was covered with mature forests when the white man came to Michigan. There weren't many deer in that country then, because there was precious little for deer to eat. A few managed to make out in cedar swamps, stream valleys, and openings created by beaver dams. There were far more deer in the semiopen lands of southern Michigan than in the north.

Then along came the lumbering era and the cutting of the trees, followed by fires fed by the slashings the loggers had left. This beautiful north country lay ravaged and blackened, plundered and scarred, a sorry sight. It was a sad chapter in the story of Michigan natural resources management, but it did have one happy result. It set the stage for an explosion of deer.

Time and Nature, aided by the reforestation work of man, covered the blackened land, first with weeds, then grass, finally shrubs and trees. The new, young growth made a paradise for deer, and they were quick to take advantage of it as wildlife invariably does when conditions are to their liking. They thrived and multiplied.

The buck law made good sense during this period. It is always good game management to protect a species during a time when it is expanding and extending its range.

The Michigan deer herd probably reached its peak sometime during the 1940's. I say probably, because we don't really know how many deer we had during those lush years when it was not at all unusual to see them by the twenties, fifties, and hundreds. Our methods of estimating deer numbers weren't very good then. They didn't need to be. We had so many that it really wasn't necessary to worry about how many we had. Hunting under the buck law—even with a large illegal kill both in and out of season—didn't make a dent in the basic herd.

We used to say we had a million deer in Michigan in those days. I suspect now that we had at least twice that many, and quite likely more. That was the Golden Era of deer.

But nature never stands still. Young trees grow into old trees, and deer go right on doing what comes naturally—reproducing more of their kind. By the 1940's, even as the deer population peaked, it was evident that disaster lay ahead. The food supply was shrinking. The yards began to show browse lines—everything edible eaten away as high as deer could reach. And in springs following tough winters we began to find starved deer in the yards. I know. I've had my hands in the guts of literally thousands we autopsied. In such springs the woods reek with the stench of starved deer. I still get kind of sick when I think about it.

That is why we began to preach the need to control the herd by shooting some antlerless deer. Just as it is sound to restrict harvests during a period when a game population is expanding, so is it equally sound to step-up the harvest

when the population gets out of balance with its range. We began taking does and fawns on a large scale in 1952. We would be better off today—we would have more and healthier deer—if we had started that program at least 10 years earlier! Public opinion wouldn't let us begin that soon.

The deer herd was bound to decline. We knew that. We knew, too, that people wanted more deer rather than fewer, and that our management program was going to be blamed for the drop. This remains our basic dilemma: We can't give the public what it wants—more deer.

In managing Michigan's deer under present-day conditions, we are fighting a rear-guard action, a strategic retreat in the face of superior forces. We are losing deer, slowly and inevitably, to the pressures of Nature. Our goal is to hold these losses to an absolute minimum and eventually stabilize the herd at some point larger than it would be if we simply quit battling and let Nature take its course.

Our forests are maturing. We are moving into another era of big trees and tall timber. Right now, much of our forested land is at a kind of "awkward age." Many of our trees are too big for deer food, too small to be commercially valuable. Wood is growing at approximately three times the rate we are cutting it. So long as that continues—and there is nothing in sight to indicate any dramatic overnight turnabout—the amount of winter food available for deer will go down, and so will the number of deer.

Before the 1965 season opened, we estimated that there were about 800,000 deer in Michigan. Of course, that figure is not accurate right down to the last deer. We have never claimed that our figures are exact. We do claim, and with good reason, that they are at least as good as those of any other state. They are accurate enough to be useful. And we know—and take into account—their limitations. The figures are getting better all the time as we learn more about this incredibly difficult business of censusing wildlife populations. If anybody can come up with better techniques than those we are using, we'll certainly put them to work.

Let's look at that 800,000 figure for a minute. It breaks down to 20 to 25 deer per square mile on the average. That doesn't mean every square mile in Michigan will have 25 deer on it. Some will have many more than that, and some won't have any. A square mile is a big area, far bigger than most people realize. It's the equal, for instance, of 581 football fields.

Now when you take 25 deer and distribute them in little groups of three or four over 581 football fields, and then cover those fields with trees and hills, you have created conditions that make deer far from easy to see. Deer, remember, are among the shyest, wariest, spookiest critters there are. They don't WANT to be seen. They are expert woodsmen in camouflage clothing. The wonder is that they are seen as frequently as they are, and that as many as 100,000 to 140,000 are reduced to venison by hunters every fall. The average modern hunter is no match for the average deer in a game of hide-and-seek.

What of the future? Well, first of all, the trees aren't going to quit growing. For the years immediately ahead there is, realistically, no prospect except for a continuing slow decline in deer numbers. On the brighter side, the commercial cut of timber and pulpwood in Michigan is increasing slowly but steadily. At some point the rate of cutting will adjust to the rate of growth—and it is at that point the deer herd will tend to stabilize.

Meanwhile, there are some things we can do and are doing to help carry more deer through the critical winter months. We are doing some cutting, some controlled burning, some bulldozing, some herbicide spraying to stimulate

new growth of deer food plants. We are concentrating this work on the edges of deeryards, to provide food where it is most needed. This effort, together with commercial logging operations, probably is making it possible to bring as many as 100,000 more deer through the winter than we otherwise could. By coincidence, that's about the average number that hunters have been harvesting annually over the past 10 years.

We could do more of this kind of work if we had more money and more manpower. It's expensive and it's time-consuming. It takes a lot of high-priced people and equipment. We could, if it were the popular judgment that we should, manage every single acre of state-owned land for deer. We know how to do it.

Such a program would be fantastically costly. It might deal a crippling blow to some of Michigan's wood-using industries which depend upon state-grown timber and pulp. It undoubtedly would put a crimp in many other types of forest-based recreation. It would impair the beauty of much of the northern countryside. Cuttings and burnings and bulldozing aren't particularly pretty. And, as a practical matter, it wouldn't bring back deer to their former abundance or anywhere near it. State ownership includes less than 20 percent of all the land in northern Michigan. The other 80 percent is in private and federal hands.

Nevertheless, there is opportunity to do more than we are presently doing. There is opportunity to step up commercial

Michigan Conservation Department Photo



All Michigan deer seasons for the foreseeable future must include as a basic principle the harvest of some antlerless deer every year.

cuttings if markets can be found or created. The east end of the Upper Peninsula, as just one example, has a vast quantity of wood ready for harvest. We are doing our utmost to encourage the location of a mill there. Its operations undoubtedly would enable that region to carry many thousands more deer than it does today.

Our Commission earlier this month asked us to develop a proposal for a maximum deer range improvement program. We are working on it and will have it ready soon. We are likewise carrying out the instructions of the Commission to audit our statistical methods, explore possibilities for stepped-up law enforcement, intensify our public information efforts—in short to review everything we do in deer management. The Commission has expressed its confidence in us, and we naturally are gratified. At the same time we recognize that self-examination never hurts. It's a continuing process in every well-run organization.

There is one factor working against us, in any effort we make to improve conditions for deer, that we can't do much about. That is the rapid conversion of Michigan land to uses incompatible with wildlife. We are losing land in Michigan at the rate of 200 acres per day—more than two square miles, or 1,200 football fields per week—losing it to homes, cottages, supermarkets, highways, factories, golf courses, hot dog stands, artificial lakes, and other handiworks of man. I am not here to argue that this is bad, although some of it undoubtedly is. The point is that it is happening, and as it happens the potential habitat available to deer and other wildlife shrinks. We'll never get it back. Those lost acres will never grow another deer, nor hardly another field mouse for that matter.

So far I have talked almost entirely about the biology of deer. Now I would like to look briefly at some people problems—the "people-ology" of deer, if you will.

Last fall we had some 600,000 deer hunters out in the woods, 150,000 more than bought licenses just three years ago. That is a perfectly fantastic increase, one that we can hardly account for. Since part of our job is to provide recreation for as many people as possible, we encourage participation in hunting, fishing, camping, and all other outdoor pursuits. And, before someone else mentions it, I will add that we are not averse to selling licenses. License revenues DO make up a big part of our annual budget.

At some point, however, you can get so many people involved in the same activity in the same place at the same time that the quality of the sport suffers. This undoubtedly happened in some places and at some times during the 1965 deer hunt. Six hundred thousand deer hunters just may be too many, unless we can do a better job of spreading them out and policing them.

The Legislature last spring changed the deer season dates to provide for separate openings, both on Saturdays, in the Upper and Lower Peninsulas. We did not object strenuously to this change, because we felt it was an experiment worth trying. Certainly the objective was worthy—to make it possible for more people to hunt while at the same time cutting down on absenteeism from work and school.

Judging by the letters we have received and the complaints we have heard, we are convinced that the best interests of both hunters and deer would be served by a return to the old pattern of a state-wide November 15 to 30 deer season. The Commission has recommended that the Legislature make this change.

Finally, what are we going to do about harvesting antlerless deer next fall and in the future?

I could make myself a hero to a good many people if I were to announce here and now that we have suspended all

plans to harvest does andawns in 1966. I would also be doing a disservice to the people of Michigan. The popular way is not always the right way.

Given the condition of Michigan's deer range as it exists today and given the hard, cold, biological facts that I spoke about earlier, all Michigan deer seasons for the foreseeable future must include as a basic principle the harvest of some antlerless deer every year. To do otherwise would mean not only the tragic waste of a valuable resource but also, and even more important, accelerated deterioration of the winter range and fewer deer for the future.

The numbers of antlerless deer taken can vary, and so can the machinery used to take them. We believe our area-quota system is the most workable method for Michigan, but we are open to alternatives. Some other states hold a special season on antlerless deer at the end of the buck season. Our experience with this system has been such that we are not enthusiastic about trying it again. An "any deer for camp" law has been proposed several times, and tried at least once. It might work pretty well in some parts of Michigan. In other areas, the resulting kill might be either too low or too high for the good of the herd.

Whatever system is used, I promise you this:

We will adjust the harvest of antlerless deer according to the particular situation each year. If it appears that we should reduce the bag for all or parts of the state, we will do so. Under no circumstances will we run the slightest risk of exterminating the deer herd.

This talk of extermination is just plain foolishness anyway. We couldn't do it if we tried. On the other hand, if we insist on trying to carry too many deer over winter, there is a danger that we could destroy the winter range to such a degree that some future generation would have mighty few deer to look at and possibly none at all to hunt.

The best way I know to accomplish that would be to close the season completely. The next best way would be to return to the buck law. I am sure that those who advocate such measures are sincere in their belief that deer would come back to their former numbers if given this kind of protection. Unfortunately, they are as wrong as they are sincere.

A one-year moratorium on shooting antlerless deer would be a calculated risk, a throw of the dice with the deer herd as the stakes. It would mean going into the winter of 1966-67 with more deer than the yards could feed during a normal winter. If the weather turned out to be unseasonably mild, we would win the gamble—temporarily. Sooner or later, the odds would catch up with us and we would lose those surplus deer to starvation. The longer the moratorium, the greater the disaster when it finally struck.

Ours is a wasteful society. If waste of deer were the only consideration, we might conceivably condone it. What we as professional conservationists cannot permit, if we possibly can prevent it, is further destruction of the winter range by trying to maintain a larger herd than we have food for. Our obligation to leave something for generations yet to come requires that we continue to manage deer on the basis of biology—not by popular vote.

The hard fact is that this Michigan deer herd is going to be controlled. Either we will do it on the basis of scientific biology, as we do now, or nature will do it on the basis of natural law. Those are the alternatives. There are no others.

What's wrong with turning the job back to Nature? Just this: Nature cannot operate normally in the presence of Man. It was Man, not Nature, who created the conditions which allowed the deer herd to explode far beyond its natural numbers 20 and 30 years ago. Not only did Man change the face of the land with axe and fire, he also eliminated the timber wolf, which is the principal predatory check

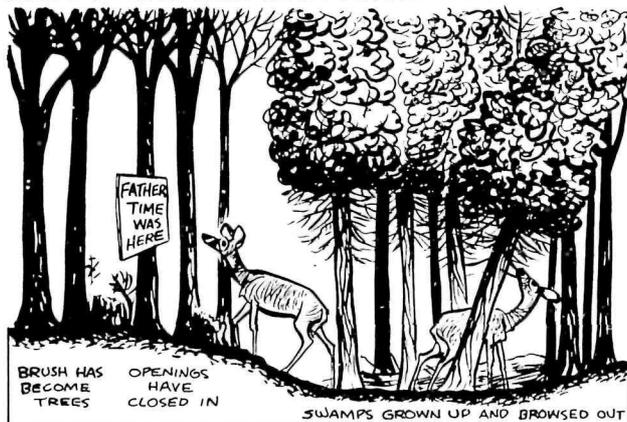
on deer, a key cog in Nature's delicate balance wheel.

Besides predation, Nature's other basic control measures are starvation and disease. I assure you that she will use them, and use them ruthlessly, if deer control is given back to her.

IDEAL DEER RANGE



SAME SPOT YEARS LATER—NOW POOR DEER RANGE



If we are allowed to continue and improve the management program we now have, a program that has proved itself over 13 years of good deer harvests in the face of constantly rising human pressures, we can maintain a healthy herd with a high rate of reproduction. Hunters can go on shooting deer in about the same numbers each year as they are now taking. There will be annual ups and downs, of course, like last year's dip.

If, on the other hand, we abandon the program and let Nature take over, we can look forward to a declining herd of small, malnourished, slow-reproducing deer. We can anticipate the gradual decimation of deer and deer hunting in much of Michigan.

That is the choice we have to make.

FIVE DECADES PAST — AND THE FUTURE

(Continued from page 2)

door adventure. Since parks are, in every sense of the word, 'destinations', they are one of the logical target areas for these part-time nomads. Camping along the way to these destinations offers one experience; the countryside through which they pass offers another; the wonderment of the destination itself climaxes the travel adventure. Camping at the destination, while an experience in itself, is but a part of a 'total experience'—one means to an end in the outdoor recreation fulfillment. We subscribe to this theory, and through it recognize that those camping in the natural areas of the National Park System are doing so in order to enjoy, at reasonable cost, the unique features which the destination park has to offer. This being the case, large campsites may not be as essential as we had at one time believed since the campers will devote their waking hours to an enjoyment of the park's environment.

With the increasing demands of visitors for camping sites and with limited space in which to accommodate this growing activity, it may be necessary to limit the stay of campers to only a few days during the heavy use season. This would permit the accommodation of greater numbers of campers and discourage those few who camp just for the sake of camping—an activity which they can enjoy for extended periods in less spectacular environment. More people enjoying that which they have every right to enjoy, in the same amount of camping space now used by lesser numbers, and with sufficient time to enjoy it, would be the ultimate result.

As we move into our sixth decade of public service, interpretation will take on increasing importance and will continue as one of our major responsibilities. Experiences gained in the past, tempered with existing and anticipated visitor demands and attitudes, will govern our future plans for interpretive programs. The increased sophistication and higher economic level of our sixth decade visitor will require the most imaginative and thought-provoking interpretive development. We will strive for simplicity of expression, but with depth in concept. A greater reliance will be placed upon non-attended visual, and automated audiovisual devices.

In the decade to come we shall renew every effort to make available to every park visitor the full, rich experience which can be his in a wonder-world of nature or in the reflective realm of an historic shrine.

We shall interpret into action the provision of ample and adequate opportunities for active recreational pursuits.

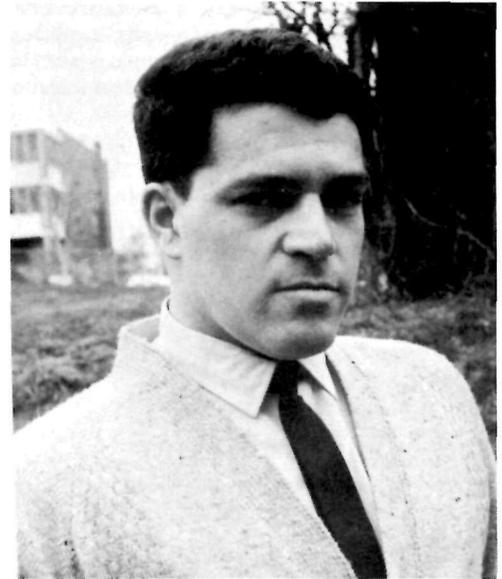
And in the decades to come, we shall renew and strengthen our ties with all agencies, at all levels of government, in the pursuit of a common goal—to offer our people, living and as yet unborn, unsurpassed opportunities for richer, more meaningful lives.

Stephen Mather once said: "A visit to a park teaches love of nature, of trees and flowers, the rippling brooks, the crystal lakes, snow-clad peaks, wildlife encountered amid native surroundings. He is a better citizen, with a keener appreciation of living here, who has toured the national parks."

We of the National Park Service shall, in this golden anniversary year, rededicate ourselves to the conservation and wise use of those national assets which can contribute to making this a great society.

Conservation in America has had a long uphill fight. But these past few years have brought us the fulfillment of some of our oldest dreams. Congress enacted a wilderness bill; concrete steps have been taken to preserve portions of our coastlines; firmly established now is the principle of spending Federal money to acquire national park areas; the Land and Water Conservation Fund is a reality; and Congress has acted to improve our waterways and our highways. We conservationists have now, at last, turned our attention to a place that we, along with many others who also should have known better, have long ignored—our American cities.

For a long while now, many people have had an uneasy awareness that the mid-20th century American city is not quite delivering the goods; that in spite of the great social, medical, cultural, and economic advantages it offers, the city has been far from an unmixed blessing, that its people have reacted to this environment in some very negative ways. There has been an alarming amount of evidence to this point: the sharp rise in juvenile crime, the increase in acts of



CONSERVATION AND THE CITY

by DONALD L. GOLDMAN ●

violence, the breakdown of traditional family relationships, the great increase of emotional and mental illness—in short, a number of things that have caused us to wonder if there is something in the man-city relationship that is causing this human and social deterioration. There are, of course, many reasons with many possible solutions, and each is being approached by those professions and interested citizens who are competent in that area. Let us, as conservationists, consider the urban problem from our particular point of reference.

It has become reasonably obvious in recent years that the America City has changed faster than has our understanding of it. Our society has confronted problems in its cities that have frustrated our traditional methods of planning and have confounded our finest thinkers. It is not a new phenomenon we face, but a logical outgrowth of the past. As orbiting satellites are to conventional airplanes, so are today's urban centers to yesterday's cities. Perhaps our understanding of cities is finally catching up to the reality of the situation. If that is so, all who are concerned with cities and are trying to improve the quality of city life should pause and reflect on the nature of the problem and how our own efforts fit into its solution. More specifically, how do we, as people interested in the conservation of natural values and the protection of beauty, relate ourselves to the urban problem? If we are to succeed in our efforts, we must reevaluate our goals and our methods to ascertain whether or not they are appropriate to the need. In other words, just what is the role for conservationists in the improvement of American city life?

Many people have observed that there seems to be something inherent in big-city life that builds up in many of us a "charge", an intangible feeling of discomfort or dissatisfaction or frustration that experience has shown us can best

be drained off by getting away from the city. This irritation is perhaps our mental and emotional response to the increasing artificiality of our lives. More and more we find ourselves losing the satisfying and rewarding relationship with the land and nature that was such an important element in the development of our national character.

Historically, the solution to this problem has been to provide great parks, forests, and beaches at considerable distances from the cities, to which people could occasionally journey to drain off the charge; thus, they might then temporarily escape from the city to refresh themselves and reestablish contact with nature. More recently, as the parks movement matured, there was a reawakening of a long dormant program to provide smaller parks and open

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He did research work in the eastern Sierra Nevada on the relationship between the physical geography of this mountain-desert area and the recreation use it receives.

During 1961, Mr. Goldman worked on one of the ORRRC projects, writing the geographic material for Study Report No. 21, Vol. III, "The Future of Outdoor Recreation in Metropolitan Regions of the United States." (L.A.)

Later he joined the National Park Service as a park planner for National Capital Region and has done several studies into physical and cultural facets of the National Capital Parks, including a recently published report on "Outdoor Recreation in the National Capital Region."

spaces within the cities, thereby allowing the charge to be drained off by more frequent escapes from the urban environment and at much less distance from home. Implicit in both of these efforts has been the notion that parks and open spaces would serve to provide relief from the dehumanizing effects of city life.

Now, in the thought-provoking proposals of President Johnson and Secretary Udall, we begin to discern the dimensions of a new approach, an attempt to prevent the charge from building up in the first place by removing some of its initial causes—by replacing the ugliness of our cities with beauty, and the artificiality with nature, and the drabness with life.

We recognize that all is not well with city life, and we think we know some of the reasons; now we must begin to evaluate some of our long held values concerning progress, speed, and leisure in terms of our new understanding. Mr. Udall did just that in his book. "The Quiet Crisis", when he asked, "Is a society a success if it creates conditions that impair its finest minds and make a wasteland of its finest landscapes? What does material abundance avail if we create an environment in which man's highest and most specifically human attributes cannot be fulfilled?"

For far too long city planning—or more commonly unrestricted city growth—has responded mainly to such considerations as: how can we get from here to there fastest? or what is the most efficient distribution of things? or where will developers make the most profit? or what will be the effect on taxes? Now, in the social and emotional ills facing the cities is disturbing evidence that perhaps human well-being is not solely dependent upon speed or efficiency or economics, that perhaps we also require beauty and stillness, considerations that have often been ignored because they did not come under the heading of "progress" and could not be valued in dollars. But now a generation of planners who were born and educated in the modern city, who have never had the opportunity to live beyond its crowded city limits, yet who feel that something is missing, is beginning to wonder about human needs and to ask, "Where can we walk?" rather than "Where is the nearest freeway?"

In addition to the human discomfort and social distress that people experience as a consequence of their artificial environment, there is a more practical problem that we conservationists recognize. Living and learning as they do in surroundings of concrete and steel, air conditioning and frozen TV dinners, many city dwellers have almost no comprehension of the land and its processes, such as the

growing of food, the ways of animals, the changes of weather and season, the function of soil, and so forth. Living as we do on an artificial platform of our own making, food, water, clothing, entertainment and everything else is passed to us by unseen hands from unknown sources. We have come to take for granted "instant everything". So, as might be expected, this lack of understanding of the land and its ways leads inevitably to an absence of any sense of dependence upon nature. And this, as we in the parks and forests see daily, breeds a failure to protect and preserve them.

Therefore, looking for ways to reestablish some contact with the land and to bring more beauty into our cities is not merely a back-to-nature fad, but a sincere effort to achieve a better form of city and a better way of life by providing for human esthetic needs. And these influences for a better life—such as open space, color, natural values, beauty, and even, transistor radios notwithstanding, peace and quiet—cannot be understood in terms of numbers of annual visitors, or acreages per thousand residents, or number of residents within "X" miles, or property values. They don't lend themselves to data processing or statistical analysis or the other analytic and codifying tools that our society is coming more and more to rely upon; they register only on the senses and the imagination and the intellect, and their essential nature is completely overlooked by our more "sophisticated" methods.

So here we are, conservationists whose goal has been to preserve a part of our natural heritage and who have tried to reestablish an appreciation of nature as a part of daily life—how do we fit into the national effort to improve and bring beauty to our cities? The way this has been done in the past was for nature lovers to fight for parks, parents to fight for better schools, humanitarians to fight for improved public welfare programs, and so on, the problem being that each of these special interest groups was ignorant of or uninterested in the goals of the others. The result has invariably been poorly directed idealism with a tremendous waste of energy. It took a long time for the realization to dawn that the problem of the cities is so great that only by coordinating our efforts and cooperating with each other will we achieve our mutual goal.

These human needs and urban shortcomings cannot be treated separately as if the others did not exist. More flower beds and more parks alone will not solve the problem—any more so than better schools alone, or welfare, transportation, housing, or pollution abatement alone.

Watts Branch, Washington D.C.



Photo by Abbie Rowe, NPS



Photo by Abbie Rowe, NPS

As important as each of these factors is, they are each part and parcel of the solution, and each must be dealt with in a concerted manner with due consideration of the others. Only when the entirety of urban life and the urban scene is improved along the lines indicated by human needs, spiritual as well as practical, will our cities become real homes.

Today our nation is poised at a signal turning point in the development of its land and its human resources, and we can begin to see the rough outlines of a new phase in American conservation. It is something new, and therefore exciting. It finally utilizes our accumulated knowledge and understanding of our land and ourselves in the way such education was meant to be used: to help us to see beyond our immediate problems and needs to the ultimate, underlying causes, and to act on them.

We began to catch a glimmer of this awareness when Secretary Udall and other highly regarded conservationists started speaking of our total environment, rather than isolated parts of that environment. It took on meaningful form when a respected scientist like the late Rachel Carson could convincingly point out that the profligate use of just one thing—in this case poisonous insecticides—could pose a serious threat to that total environment. In other words, we were beginning to look at life and land as a continuity, and to seek solutions to our problems from the entire range of our experience and knowledge.

The National Park Service, long concerned with the preservation of large wilderness tracts and significant historic sites, is now finding itself more and more involved in the movement to bring beauty into our cities. Our most inten-



Photo by Wm. H. Spradley

sive and extensive involvement in the modern city is in the park system of the Nation's Capital. Washington, as all big cities, shows evidence of the strains of our times. But it shows, perhaps better than any other American city, just what can be done when parks and open green places are woven into the very structure of the city. This, of course, owes to the fact that Washington is the only large American city that was planned before it was built. As beautiful as Washington is, however, there is much ugliness yet and a lot to be done before the city's full potential of beauty and life is achieved. What must be undertaken is not solely the

beautification of Washington and other cities, but the making of them into better places to live by adding human values.

We should not delude ourselves that parks or open spaces are the most important things in today's city. Decent housing and good schools and fair law enforcement have to come first if we are to provide a meaningful society. But we also believe that efforts to beautify and enliven will certainly aid in achieving a truly humanized city, one that is designed for people, instead of machines or buildings.

We must of course continue to plant flowers and establish parks as tangible improvements for our cities—but our greatest task will be one of education.

The problem here revolves about the dilemma of helping to reestablish some sort of ties between today's urban man and his largely forgotten natural heritage. And it is not at all naive to use flowers and trees as one of those ties! In city parks, such as those of the Nation's Capital, we have a marvelous resource for this task. Programs like the Park Service's Junior Naturalist Course, in Washington, D.C., school visits by uniformed Park Service interpreters, routine park interpretation for adults, and school sessions conducted in cabin camps are examples of programs that can reestablish in people whose only experience is with city streets an awareness and appreciation and understanding for their natural heritage. In other words, city people are being introduced to another side of life that is not readily apparent in their daily lives, and through encouraging them to enjoy this new thing, hopefully they are learning to protect it. In this way, by utilizing the potential of parks themselves and having them act upon the curiosity and interest of the urban resident, and by enhancing the subtle contribution they make to our emotional comfort by their mere presence in our crowded and noisy cities, conservationists and park people have a wonderful resource with which to help make city life a more rewarding thing.

We who love parks and nature have an important contribution to make toward the betterment of our cities, but this role will be only one part of a major undertaking involving many approaches and many disciplines. We must help the planners, politicians, and philanthropists to understand the importance of a more human and beautiful city environment; we must educate ourselves as how best to create that environment; and then we must educate the public, providing the city dweller with the awareness and understanding of his natural heritage that will enable him to truly benefit from the better city of the future.

If we can appreciate our parks or flower beds as "open space in miniature", with benefits for city people quite similar to, if on a vastly different scale than, those offered by our wilderness areas, we will be coming down to the basic human needs that we find in a metropolis. And in this it is imperative that beauty be put on a scale and at a place where it will most readily work its good on city life. Mrs. Lyndon Johnson has undertaken leadership of a program to help beautify Washington, and one of her first actions was the symbolic one of planting some flowers in front of a public housing dwelling. Certainly those few flowers at the doorstep of that home will mean more to its city-bound occupants, and will bring more beauty into their lives, than all the vast wilderness parks a thousand miles away!

So, as we attempt to alleviate the harsh artificiality and the drab ugliness from our urban scene, and to introduce values based on beauty and simplicity, let us always bear in mind that our efforts are merely a part of our society's massive assault on the ills of the metropolis and the life it supports. Whatever we conservationists do must fit into this major endeavor.

THE PLAYGROUND REVISITED . . . A NEW EVALUATION

by ASHER B. ETKES ●



*H*ave any of us stopped to consider how amazing it is that here we are about to send a man to the moon and yet we know so little about a child's most basic, most irresistible, most vital act—his desire to play.

We do everything for our children; we educate them, we train them, we discipline them, we direct them and yet we haven't really taken full advantage of the only thing they offer us freely . . . their desire to play. We haven't, as yet, bothered to really study this most important phase of a child's life and turn it into a constructive, productive, learning experience.

Analyzing our whole approach to children's play, it seems that we are primarily concerned with children having fun during play. But is that what we should really be concerned with? Left to their own devices, children always have fun and it thus should not be the adult's responsibility to plan fun for children, but rather to make sure that their free time is used constructively and productively.

We are often short-sighted about the happy spectacle of children at play. Are we not overplaying our hand by subjecting all children to playground environments that are really suitable for a very few? What comes through the playground's clamor may be the sounds of fun, but how many of the children at play are actually sounding them?

Consider this. We peg our schools' academic curricula at a mean average I.Q.; or a bit higher to motivate a little higher intellectual aspiration among those who straddle the line. Gifted children, the few among many, are led into Special Progress classrooms where their special capabilities are nurtured and cultivated. They flourish on challenges that would discourage the less capable.

Let us draw an analogy that will shed some light on our flagrant error in the play-world just outside the classroom, where children spend one-third of their lives. Make the fair presumption that children have A.Q.'s . . . Athletic Quotient, if you will. Few are truly standouts in A.Q. ability (as few are in the intellectual sphere), with what confronts them in the unfortunately traditional playground. Play equipment is scaled for the exceptional, for the A.Q. gifted, for the one child in three who is physically, psychologically and emotionally fit for the challenges of traditional playgrounds.

Why should we be any more inclined to expose a child to equipment he cannot handle, than to plump an average learner into the intimidating midst of a group of geniuses and near geniuses? The damage could be great.

While we condition children—as well we should—with education, training and discipline, we have faulted them in the matter of play. We have not profited from the enormous opportunity presented us in children's unquenchable desire to play. Unfortunately that desire has not been turned into an educational experience.

We have failed to examine the psychology of play, and to make useful projections of these findings to play equipment. We have failed to acknowledge that "fun" is a faulty measure of value of play . . . and that, indeed, there is a most

significant value in the play experience itself. In fact . . . we have failed to admit that playgrounds have failed.

Perhaps the heartwarming sight of children at play has distracted us. Their joyous shouts, inexhaustible energy, the wonderment that never ceases, fills the onlooker with nostalgic pleasure. To be a child again! To be a child in his unique world . . . the playground! Such may be our fantasy, but to assume that the child on the seesaw, swing, slide or whirl is reaping much more than empty and dangerous fun, is sheer delusion. If we envy him, we partake in the error about playground equipment that has blinded us because it is so universal, so profoundly wrong.

The error seemed clear during my first analysis of play equipment. Strip away the concealing illusion of "fun" and it must be agreed that standard play apparatus is unproductive, uncreative and unsafe. It will keep children engaged

● Asher B. Etkes, president of Playground Corporation of America, is a pioneer in the development of new concepts of play environments for children. He has also developed new approaches to the planning of effective playgrounds for handicapped children. An architect by training, he has been involved in the development of many new products for the educational field and as Chairman of the Board of Transvision Electronics, Inc., did much to pioneer the field of educational television.

He recently presented the thoughts expressed in this article as a keynote address before an international exhibit of playgrounds in Dublin, Ireland.

only because children will always play. But swings, seesaws, slides, jungle gyms and merry-go-rounds have but one, barren play scheme; give but one sensory experience and are devoid of any quality that will stimulate and inspire imagination, creativity and development. Above all, they are dangerous, even to the 35 per cent or so of the children who have that high A.Q.*, and are their most avid users. The youngster from one to five years of age, captive of the traditional playground, may be so traumatized by sterile equipment, or accidents upon them, that his development may be jeopardized.

While there seems to be wide acknowledgement of their hazard factor, standard play equipment is still bought in large volume simply because it has to be bought. This is so for two reasons: (1) Until now, nothing else that was really new was available, and; (2) in view of the baby booms the world over, children have to be herded into compact and convenient play environments in line with practical institutional systems for teaching and training them. The playground industry carries on, yet no hard questions are posed or answered about its product's inadequacies. Apart from the seemingly insoluble matter of safety, it appears that there is much that is being overlooked:

- * Practically all play equipment is adult-oriented but miniaturized for children. Does this really answer the need?
- * Nothing truly satisfactory in the way of play equipment has been designed for children from ages one to six years. Isn't this a terrific deprivation during the most critical growth period?
- * No real thought has been given to the development of effective, self-directed play opportunities for handicapped children.

I will soon discuss these issues in turn, but before doing so, it is edifying to examine official support for my contention that the classical approaches are wanting.

Item: Leading health authorities frequently cite the failure of today's youth to meet minimum physical fitness standards. The endurance of school-age children performing simple calisthenics is alarmingly low.

Item: Spokesmen for government and municipal health agencies find it necessary to urge youngsters to exercise more vigorously and to engage in physically strenuous sports. Programs have been devised, professional athletes have endorsed them, and parents have been exhorted to prod their children into joining them.

Item: The military has been rejecting a growing number of draftees for purely physical causes. Poor coordination and body tone, faulty reflexes and a host of related neuro-muscular difficulties plague recruit material. More important, many of the young men who are drafted find out that although physically they are capable of performing rigorous tasks, psychologically they cannot carry them out. Military instructors will tell you the real problem with young draftees is the basic fear they have of achieving many physical feats.

Item: A leading physical education authority has suggested that to achieve better performance from young people, a re-organization of physical education training at the junior and senior high school level take place. What he doesn't realize is that many of the youngsters who enter junior high school have already developed deep-seated fears of physical activity because of bad experiences and accidents they sustained on playgrounds during their early years.



Traditional Playground Equipment, Protective Parents

From these straws in the wind, a meaningful pattern begins to take shape. De-energized and unathletic youth have failed to achieve their physical potentials during their school careers, and despite a great deal of current propagandizing, they are still failing. It's obvious that a condition of physical atrophy is setting in. Sports are for spectators, and exercise is just an athletic event seen from an armchair propped before the TV set.

When the physical competence of this young generation does meet its first acid test, as happens in the military induction center, the price of passivity tallies high. Wash-out rates are alarmingly high. Clearly, we are becoming prosperously unfit. And what is true of the would-be recruit who flunks his physical, is truer still for the young female who is even less socially motivated into competitive sports and "masculinizing" activities.

Do schools which have under-emphasized mass-participation sports and gymnastics on a junior and senior high school level deserve the bulk of the blame? Some leading physical education authorities think so . . . but wrongly. Or the soft, comfort-steeped parent who does nothing within his family to encourage his children to exercise? Perhaps. But while little will change the influential habits and attitudes the child is guided by in the home, many schools have tried to reverse the tide of laziness that seems to be sweeping over students. However, a miraculous rejuvenation by means of enriched physical education programs and a little more compulsory calisthenics, just has not occurred. The pleas of physical education advisors to leap eagerly into active rounds of extra-curricular games have fallen on deaf ears.

While the maturing child may defect from a life of sports because of the multitude of academic and social demands on his time, he is more often inactive because of bad preparation for athletics and physical activity during his earliest years. Something critical failed to happen during his first

exposure to physical play, during his vulnerable years from one to six. This deprivation, one traceable to a frequent adult misconception about the nature of play, is responsible for depressing his will to engage spontaneously in physical pursuits during the years that follow.

That omission? The productive and constructive element of child's play . . . the foundation for creativity, self-confidence and self-esteem . . . the opportunity for utilizing play as an ever-expanding experience for examining and properly understanding his notions about his physical reality. For a child when play is self-directed, and is constructive and productive, it is of a far different breed than the aimless teetering on a seesaw or sliding down the slide which is so typical of the games universally offered to the very young.

The kind of play that inspires a keen desire to use the body and imagination, to feed the hunger to know and to learn, is one that is safe and perpetually creative . . . "possibility-minded" in the sense that it expands as the child exhausts his primary concepts about the game. He moves on within it to a higher, more complex order of physical and mental experiments, and gains confidence enroute. While doing this, in fact, the child is constantly learning. Regrettably, this is not the kind of play opportunity that has been traditionally offered to children. The one-purpose swing, seesaw and slide have become monuments to a false philosophy . . . that of limitation-mindedness . . . the belief behind the design of nearly all play equipment foisted upon the one to six year old. And the young child is unthinkingly plumped into this environment by harried, working parents who need only be satisfied that Junior is having "fun".

We often fail to see how the conventional playground is a denial because of children's visible and obvious enjoyment within it. "Fun" is our blinder, and improper yardstick to measure the value of play. It is a fact that a child at play will always have fun, no matter how meager the content of his game. He will have fun because he is free and un-



Equipment with Many Play Opportunities

inhibited . . . the training, education and discipline that adults impose on him elsewhere are not present. His natural inclination to resent the pressures to conform to their systems of behavior are not there to resist. Play becomes childhood's liberation and delight . . . and it will hold the youngster's total interest and commitment, while the spirit moves him. Without pleasure and freedom he will not play . . . without his absolute involvement, he will abandon his game. In Montaigne's words: "The games of children are their most serious business."

Since fun and involvement tend to become our only criteria for evaluating play, we often ignore its "quality". The enthusiastic circuits up-and-down the slide that are made by the child, are accompanied by joy . . . but what of the activity's creative worth? The rapture of the youngster deludes us into thinking it has great merit as he repeats, unproductively and unconstructively, a limited-minded play event. There is little to learn from it, and there is nowhere else to go.

Even the most persisting child will soon exhaust the potentialities of limitation-minded play equipment. Experimental as he is, and with a short span of interest, he must go beyond the game he has tired of, the challenge he has met. But where? How long will a child repeat the single play scheme? He may innovate on the slide, dangle dangerously from its underside, walk up its ramp, or make a game of blocking the ladder and daring others to get by. He may use the swing wildly and hazardously, or monopolize it with a violent challenge to others to unseat him during the crowded recess or lunch break period. These adventures are short-lived and unproductive, as well as dangerous. He eventually becomes bored, frustrated, and must turn elsewhere to respond to the ferment and curiosity within him.

Often unrealized is another basic flaw in our concept of the playground's proper function, and the character of the children who play within it. This error has built countless playgrounds which are assemblies of play equipment oriented to adult capabilities, but miniaturized for children. Most adults forget that children look up at play equipment, while adults look down on them. Equipment is designed under the misapprehension that the child's play needs conform to the recreational objectives of the adult, and that scaled-down devices which tap only his physical resources are enough. It is not enough . . . for this concept shortchanges the educational research activity which the child must engage in while at play in order to benefit from that play. It also ignores the remarkable statistic that only approximately 35 to 40 per cent of the average child population are psychologically, emotionally and physically equipped to derive value from the traditional playground. These are the natural athletes who are going to be the baseball, football and tennis stars of tomorrow. Generally speaking, the rest of the children are afraid of the conventional playground equipment and due to fear make very little use of them, or don't use them at all.

The design of limitation-minded play equipment such as slides, swings, seesaws, or so-called modernistic adaptation of animals into play equipment, stultifies the child's need to progressively initiate imaginative game variations on them. They allow but one inflexible activity. Self-education and continuous confidence-structuring is hindered since the activity is inhibiting to any but the most athletic. The majority of young children are too sensitive to failure and frustration, too uncertain of their physical prowess, and too easily intimidated by competitive challenge, to enjoy the conventional playground as it should be enjoyed. Authorities are beginning to acknowledge that traditional play equipment is the happy property of only the rare and exclusive group

of youngsters with aggressive and extroverted personalities, and with physical competence of high order.

The net results for the majority is an early disillusionment with play, and in some cases, serious trauma. Where the games of childhood are empty, just vehicles for "fun" and nothing more educational, or where juvenile athletics were episodes associated with difficulty and failure, psychological scarring results. We see the final effect with those recruits who enter military service with "blocked" attitude. They are afraid of the physical demands facing them in training, and they tend to "freeze" at these demands. They show poor affinity for the strenuous job of building muscles and bodies.

If we are not generally becoming unathletic, certainly we have not made much headway in mending our ways. Yet, even some enlightened physical education instructors tend not to understand the inbred nature of the young's disdain for athletics. An example of how this can work is the record of one of America's greatest baseball players—Ty Cobb—established many of the all-time records in the books. His indomitable drive and will to win led him to these great heights. Unfortunately, his record as a manager was a dismal one since he always expected his players to perform as he did, not realizing that they were incapable of his accomplishments. In order to get the most from them he would have done better to manage them on their own level of capabilities. Another example of this sort could be any young, brilliant boxer who is led on too fast and by being challenged by opponents that due to lack of experience he cannot cope with, his career is forever damaged.

To study the child's "core" years of one to six is to see what both the problem is and what the answer must be. We can readily recognize how limitation-minded play equipment will bore some children, frustrate others and demoralize a few. By their very nature, they also require parental or teacher supervision to prevent children from injuring themselves on inherently unsafe equipment. Thus, the adventurous child in the traditional playground finds himself a captive in a supervised situation with few creative recourses. Whether or not "fun" is bad is irrelevant; what truly matters is the minimal opportunity for constructive and productive play. All this is poor conditioning for athletic recreation in adult life, which should be sought for its own sake.

The solution is buried in the character of play itself. It follows from the current view of pediatricians, child psychologists and educators . . . that play is a learning research activity essential to sharpening judgement and pride, to building mature concepts and to enhancing self esteem. Play is the stuff of experimental growth. Play is an intensely personal act in which the child must be given the freedom to employ all his perceptions to work out the complex fantasies about his immediate environment. And this exploration is one that must be traveled alone . . . with minimal supervision, limited only to a little judicious guidance down the proper creative channels. If the child is provided with play tools of a possibility-minded order, he invariably will pace himself at his own rate of skill and ability, progressively succeeding at games that scale higher in difficulty, and coincidentally making sane, logical, and socially-correct adjustments to his world, and ours.

By permitting him his full ration of spontaneity in experience-rich atmospheres, his earliest experiences with play will imbue him with a life-long bias for game participation, for sports, for physical action. The common failure to give him freedom, has bred an adult population which gradually reduces its athletic participation as it moves into middle age. Those who have been seriously damaged by early playground life, will neither engage in sports nor en-

New playforms to challenge the child's imagination.



courage their children to do so. But those who have been oriented toward athletics by the memories of playground pleasures, will continue them long after their successful games of childhood are over.

How and where should the child play? Obviously, in a safe, appealing and provocative environment. This ideal can be achieved indoors and out . . . but it is in the playground that children will be able to combine both mental activity with a full exercise of their physical powers. In the play area that is structured and scaled in such a way that its users can feel safe, unthreatened, socially-unpressured to compete, and continually stimulated to move spontaneously from one game to another. The games must flow naturally from one activity to another as the child accomplishes one play episode at his own level of skill, and then proceeds to attempt another more challenging feat. In a word, playforms (play equipment) must be *inter-related* (as swings, seesaws and slides are not), in such a way that all his games within the play space can be linked together both in the game plots he is creating and in their physical proximity. This inter-relationship is a key to the whole concept of creative, productive, self-directed play.

In the course of this play, the youngster is both posing and solving problems. Whether it be an athletic feat, acting-out a fantasy, or dreaming-up some wild speculation related to a playform (equipment), he is cultivating his dexterity, coordination, judgement and mentality. He is learning to cope with those things he feels and senses. And he will, in time, bring a more confident and coherent ego into the stressful exposure of competitive and cooperative play with others. At no time has the spontaneously creative and independently playing child had his game initiative interfered by strong adult leadership. He was the captain of his own game, and the proud winner of his own success. This builds strength and courage.

Unfortunately, a visit to any pre-school playground is an experience of parental over-protection in action. We will see the very young puttering in sand pits under the cautious surveillance of mother or guardian. While sand play is constructive, permitting the child full reign over his game, the material he wallows in is easily soiled and contaminated . . . generally, sand is unsanitary. And frequently, the fastidious parent will withdraw the child as soon as his young limbs and reflexes allow, for an escapade on the slide, seesaw or swing. This is the moment that the child's career in over-protected play begins. Parents will seat their offspring on a

swing, cautiously "hand" him along in small, careful arcs—always present, always assisting. While it is true that the child will be having "fun", he does nothing for himself. And the same is true for slide and seesaw play.

Children will be paced in their earliest playground activities by an ever-present parent. For, in fact, the inherently dangerous nature of standard equipment requires this kind of on-site attention. When, as invariably happens, the child ventures into the playground for his first, unaccompanied adventure, he is in trouble. Without any proper experience or the presence of an adult hand, it may terrify him, either sending him back for parental support once again, or paralyzing his will to ever again approach playground equipment. At best, a traumatizing first accident sets up negative barriers to future, self-initiated sports within the playground. Where the fear persists—as it most frequently does—the child can be marked with a lifelong bias against physical challenges of any sort. His confidence in physical play and activity has been permanently shaken.

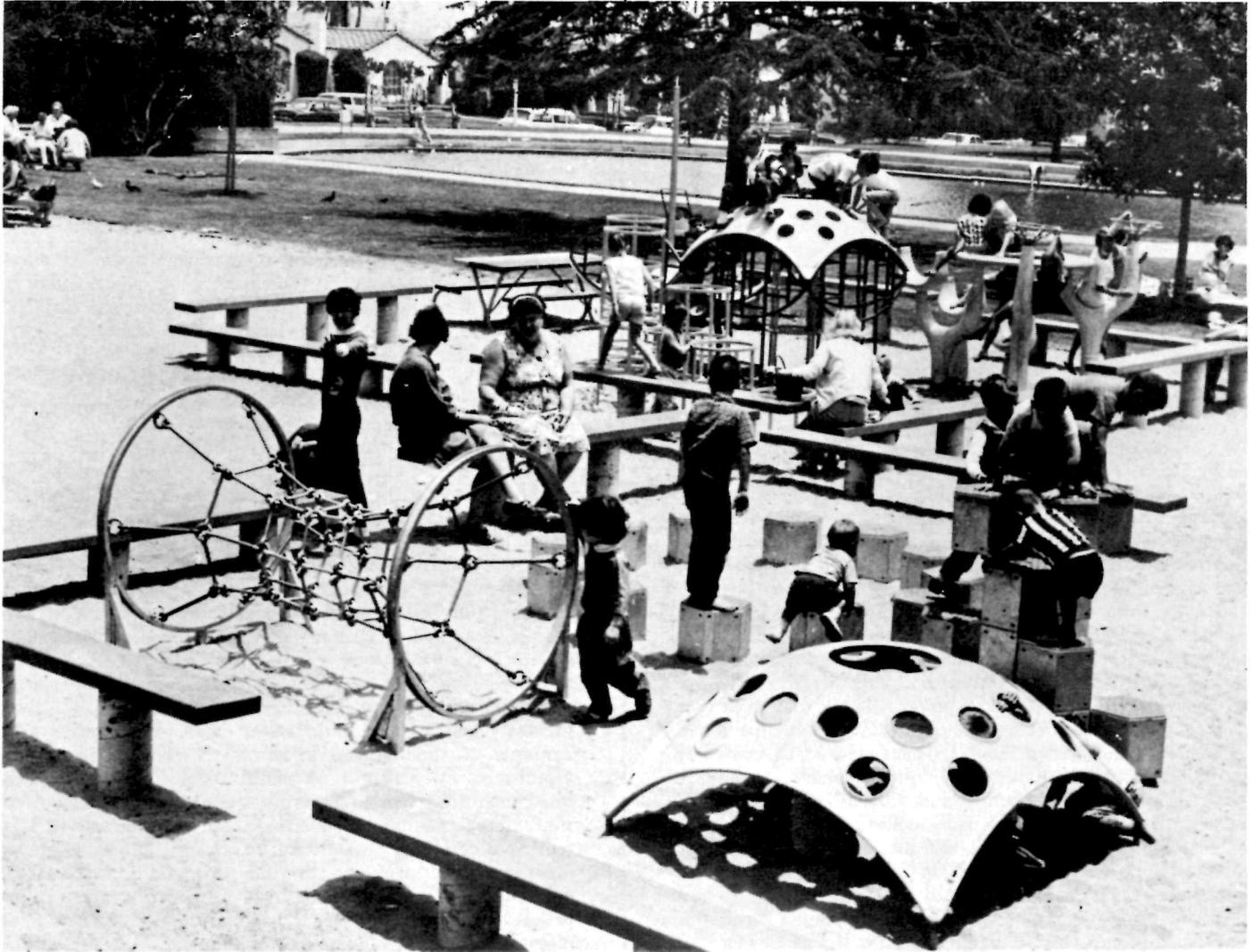
While it is true that the home is the most influential factor in forming a child's approach toward self-directed games, the playground still can modify poor attitudes. When play is over-supervised or outrightly discouraged by family, can we afford playgrounds that reinforce the inhibitory atmosphere about the child? No power will alter the inbreeding of fears and dependence by parent misjudgement, but the properly-designed playground (a far cry from what we have now) can preserve the spark of spontaneity in children with dampened spirits.

Few errors have been so blatant as those of over-supervising the youngster at play. The emotionally, physically or mentally handicapped child is an extreme, but still valid, example of the damage of over-indulgence. Historically victimized by parental or institutional over-supervision, his rehabilitation has sometimes been compromised. And this mistake has often caused disabled children to sink further into crippling dependence, to advance into even deeper disability. Yet with the limited-supervision recreational technique, applied with possibility-minded playforms in the properly planned play area, handicapped youngsters have often shown marked levels of improvement, with confidence-building and physical proficiency, gained.

This bears good testimony for an approach to juvenile play that is a kind of self-induced and self-perpetuated "trial-and-error" process . . . with playforms (equipment) scaled to the sizes, ages and needs of the playground population. Such a setting must have a coordinated family of playforms, abstract in design, but easily relatable to things that a child recognizes in the real world, and with which he can experiment comfortably. Conceptions of rocks, trees and shelters appear in some modern playgrounds of this type. These are converted by the fertile minds of children into fanciful objects for manipulating, scaling or integrating into complex game schemes.

Experience of leading educators has shown that realistic play equipment, like scaled-up reproductions of animals, also bears the onus of limitation-mindedness. Since they are approximate representations of things in the child's real world, there is little imaginative byplay stimulated by them. A "play" turtle, though it is a concrete caricature of one many times over-sized, is still a turtle. It may invite an occasional sortie on its back, but its practical familiarity to the child does not invite many inventive associations and game schemes. He certainly can't think of the turtle as a space station, or submarine, or airplane, or for that matter any other possible game situation except as a turtle.

Consider also that 1975 should see over 70% of the population of the developed countries living in an urbanized



Safety is the keynote — even 15 mo. old children need no supervision.

society. The properties of nature, its fields and trees, its landfalls and other endowments will largely be removed from most of our children. And with it will be gone the infinite possibilities that nature provides for fulfilling play. To reconstruct, as best we can, the superstructure of natural objects, is to retain for children a large measure of the unique offerings that the countryside has always provided for constructive games.

Abstracted playforms capture a child's interest for hours, for each is a step away from another, and together they are evolved by the child's leapfrogging imagination into wonder-worlds with unlimited play potential. Since they are stationary and safe, children will swarm over them and feel secure. This confidence and safety is a principal reason why youngsters will brave more heroic challenges on them . . . an excellent way to sharpen hand and eye coordination, balance and muscular development. And thus, with genuine "fun", the ideal of safe constructive and productive play are achieved.

The child is forerunner of the man he will become. Accepted that his most serious business is play, it is our duty to help him make that play a fruitful predecessor to the process of growth and maturation. The fault, we must accept, lies in the poorly planned playground and over-control that

is perpetrated on the very young. This must change to plot a new course that will stop shortchanging our youth.

And this course is a logical one . . . exciting with promise. Let us build playgrounds that give our children the liberty to explore, experiment and experience. Let us build them to conform with what we must agree is the real nature of children's play needs, and with due respect for their power in shaping the adult. Let us design and build what are, in a sense, outdoor classrooms for teaching of physical skills and for cultivating the confidence to perform them. Let us stock these classrooms with a new generation of equipment that will at last give children more than "fun" . . . that will provide them with safety, the pride of self-accomplishment, and the incentive to flex their creative imagination as they must.

We have mistakes to undo, attitudes to unmake and prejudices to dissolve. But with the new generation of play-scapes that are tailored to the behavior characteristics of the very young, we are well on our way. We may foresee a time when children will play themselves properly into maturity . . . with health, vitality and courage. A time when play will become a continuity, producing an adult population which is vigorous and unafraid . . . motivated to using their bodies in sports and athletics with the forgotten pleasures of childhood.