

Project Learning Tree, an award-winning environmental education program designed for those working with youth from preschool through grade 12 created in part by Rudy Schafer, marked its thirtieth anniversary in 2006. Considered the cornerstone for environmental education, PLT's use of the forest as a "window" on the world began with the underlying goal to teach kids how to think, not what to think.

PLANTING THE SEED

PERSPECTIVES FROM A PROJECT LEARNING TREE PIONEER

Finished shortly before his death on September 13, 2007, Rudy Schafer, in this excerpt from his forthcoming memoir, *For Kids, the Land, and the Future*, reflects on the early days of Project Learning Tree (PLT) and the Western Regional Environmental Education Council (WREEC), the organization that, along

with the American Forest Institute (now Foundation), created PLT just over thirty years ago. PLT began in thirteen western states and has since grown to all fifty states, the District of Columbia, and eleven other countries.

Both PLT and the Council on Environmental Education (CEE, WREEC's national-level successor) are strong and growing, thanks in part to the dedication and diligence of Rudy and others who ensure that the educational programs they developed were unbiased, high-quality, and as Rudy used to say, "work at the nine o'clock Monday morning level" for classroom teachers.

Rudy Schafer grew up in Los Angeles and graduated from Hollywood High School in 1945. He joined the Navy in the last days of World War II and then attended college on the GI Bill, graduating from the University of California, Santa Barbara. Those who knew Rudy and his love of words should not be surprised that his original career goal was journalism. But he turned to teaching as a more secure alternative, and by 1950, he and his wife, Natalie, were earning \$5,800 between them as two newly minted teachers in Los Angeles County.

The eleven summers that he and his family spent in Olympic

National Park, where he worked as a seasonal park ranger, catalyzed his interest in the environment and conservation, and helped him build a solid knowledge of environmental science. He vividly recalls fighting a fire ignited by an untended campfire. As he would say years later, "It is our choices, both as individuals and as members of society, which affect environmental quality." Back in Los Angeles during the school year, Rudy began developing conservation programs for schoolchildren and in 1967 was asked to serve in the newly created position of conservation-environmental education specialist in the California Department of Education in Sacramento.

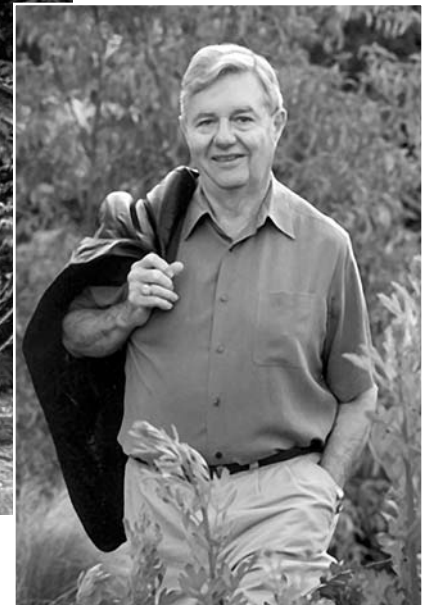
In that position, Rudy took environmental education (EE) many steps forward in California schools and, as he describes below, forged relationships with educators and resource professionals throughout the West—relationships that led to the creation of WREEC and PLT. He retired from the department in 1987, but a person with Rudy's energy and enthusiasm could hardly be expected to hang up his hat. He remained active with PLT, CEE, the National Wildlife Federation, and many other organizations for the rest of his life.

BY RUDY SCHAFER



Rudy Schaffer spent eleven summers as a seasonal park ranger in the Olympic National Park with his family. The work catalyzed his interest in the environment.

In retirement, Rudy remained active in Project Learning Tree and other organizations.



PHOTOS COURTESY OF RUDY SCHAFER

ONE OF THE LUCKY ONES

I recently attended a meeting of the National Wildlife Federation in Seattle. As a former board member, I was introduced along with other guests. At break time, Stan Moberly, formerly with the U.S. Fish and Wildlife Service and a member of the current board, approached and asked if I was the Rudy Schaffer who put together the organization that built Project Learning Tree, Project WET, and Project WILD. “That’s me,” I replied. “Geez, you’re famous,” he said. “I thought you were dead.”

With a jolt like that, I decided that I better get busy on a project I had contemplated for quite some time while the lights were still working on the top floor: putting in tangible form something of the history and accomplishments of a remarkable organization, the Western Regional Environmental Education Council, the organization that worked with the American Forest Institute (now Foundation) to create PLT.

Founded in 1970, WREEC brought together state resource management and education professionals from thirteen western states to create PLT and other landmark programs, materials, and ways of doing things that were and still are major factors in EE worldwide. We were a varied lot: some in industry, some in teaching, some in the natural resources profession. We came together, all wanting to do something important for kids, and we worked our own particular miracle. We all agreed that the educational materials we would produce would be bias free and create thinking skills at all levels. *How* to think—not *what* to think—would be our motto throughout. Materials would be flexible, written by teachers and field-tested by teachers. That was thirty years ago, and it still stands today.

As founder of WREEC, I see myself as one of the lucky ones. I found my niche in the world and managed to do some things during my active years that really mattered—both to people and to our earthly environment. Not only that, but I had a great time doing so. Sure, there were mistakes, opportunities missed,

and even deceit and dishonesty on the part of some people I trusted, but such is to be expected in this less-than-perfect world in which we live.

AM I ALL ALONE?

In my early days in Sacramento in the Department of Education in the late 1960s, as the first full-time conservation specialist, I began gathering as much information as I could about what people in other states were doing in EE. I got some pretty good ideas from phone calls, letters, and through the Education Research and Information Center. Remember, this was before the Internet, so we were still shuttling paper and making phone calls back and forth. A lot of us were learning by doing and experiencing various degrees of success.

The overall pattern nationally seemed to be much the same as in California. EE was equated with nature study by the education people and was therefore assigned to science educators. In the resource agencies, most of those doing education were in public information offices. They put on programs in classrooms or auditoriums, or perhaps led a field trip showing off the great work their agency was doing. They had brochures, Smokey Bear badges, comic books, and the like to hand out. EE was not much of a concern to state education agencies, but was seen as very important by resource management people. The problem was that, although the resource people had the interest and oftentimes the resources and political clout to get things done, they didn’t know how to work effectively with schools. Now if someone could just bring these two groups together...hmm.

I started calling around to state education and resource people throughout the western region to see if they would be interested in getting together and sharing information. The usual answer was, “Great idea, but there is no money in my budget for out-of-state travel.” A few volunteered to come to California on

their own, but not enough to make up a decent group. In my own case, I had no out-of-state travel funds, either, so I could not attend a meeting outside of California without paying my own way and taking vacation days. Well, great idea, Rudy, but let's face it. It just can't be done.

FLEA MARKET LIGHTNING STRIKES

A great avocation of mine is attending flea markets on weekends. I love to dig through the junk and often find a treasure or two to add to my collection. One Sunday morning, I came across a paperback book with the intriguing title *The Seven Laws of Money*. It was only a quarter, so I bought it. When I opened the book, I read the first law: "Do it! If you're right, the money will come!" I actually felt a physical jolt of enlightenment when I read that. Yes, I told myself, my idea is right, and I'm going to get busy and make it happen!

Dave Phillips, who worked for the Office of Interstate Cooperation with the then-U.S. Office of Education (USOE), came to Sacramento regularly to look at projects the agency operated out of California. I invited him to lunch one day and pitched my idea to support a regional EE meeting. He was interested, but he, in so many words, asked how he could be sure that I could put something worthwhile together. He suggested that I see what I could do and get back to him. Well, that was encouraging, but no cigar.

A representative of a textbook publishing company had visited me on several occasions to interest me in a new EE teacher guide his company was selling. I called and told him I was working on a regional EE network, and I had been given some encouragement by USOE. The main constraint was resources to get potential members to California. Would his company spring for some of the money I needed in return for an opportunity to pitch his books to a rather select audience? Deal!

I wrote letters to the chief state school officers and principal resource management agencies of thirteen western states, inviting them to send two representatives to a meeting in San Francisco—one representing education and one representing resource management agencies—to discuss how we could approach our EE responsibilities regionally. We didn't get representatives from all thirteen, but we had enough to get some business done.

At that time, the recently created Office of Environmental Education (OEE) in USOE supplemented its minuscule budget with what was called a synergy policy, which required other USOE offices to fund EE activities and otherwise assist OEE. Our proposal to fund a project to continue regional get-togethers met the synergy requirement. I sent Dave a proposal, and he called with the good news that a two- (we stretched it to three-) year grant was approved. The California State Department of Education would administer the grant, and I was appointed project manager. At our first meeting, in Seattle in 1970, we officially became the Western Regional Environmental Education Council.

LIGHTNING STRIKES AGAIN

WREEC's third meeting, in 1973 in Santa Fe, New Mexico, was a watershed because it offered us just what we needed: an oppor-

tunity to show what we could *do*, not just get together to talk. We had two visitors, Roberta Anderson and Bob Jordan from the American Forest Institute (AFI). One evening, over dinner at Rancho Chimayo, a Native American reservation some twenty-five or so miles north of Santa Fe, our AFI guests asked if I thought the group would be interested in developing a school program for them. I told them I thought so and agreed to put the item on the agenda for discussion the next day.

That next day, WREEC members discussed the matter at length and agreed—but only if we could build a credible, bias-free program based on sound pedagogical principles. There was strong agreement that we would not be part of producing special-interest promotional materials. We left with an informal agreement that we would enter into some kind of agreement with AFI, details to be worked out and finalized at our next meeting.

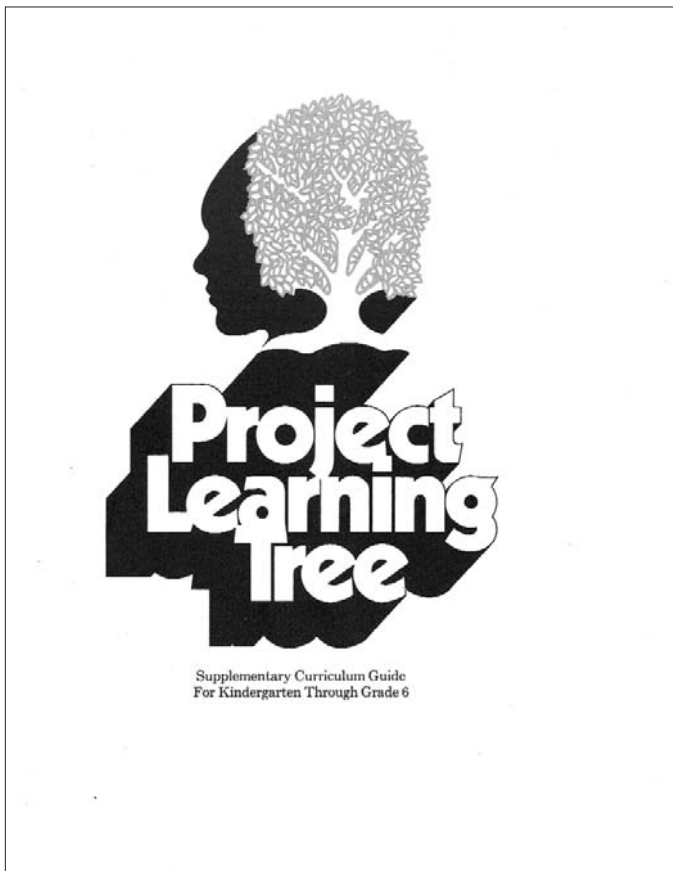
WREEC was incorporated in the State of Idaho as a nonprofit 501(c)3 tax-exempt educational foundation, so we could enter into a contractual agreement with AFI. Collectively, our members provided access to the education and resource management agencies of thirteen western states. We had the technological and pedagogical expertise to produce good materials, along with a delivery system with the potential of reaching every school in our states. And here we discovered the genius of the organization. WREEC offered a unique means of doing things involving state agencies without getting involved in bureaucratic red tape. As members of a tax-exempt foundation, members could propose, initiate, and become involved in programs such as PLT independent of their respective bureaucracies. How long would it have taken to produce our programs if each of twenty-six state bureaucracies had to sign off? Never would have happened. Someone once jokingly described WREEC as a guerrilla organization. We form up, achieve an objective, and then disappear back into the jungle.

PLT was a good deal for both parties—an example of what I call the Christmas tree phenomenon. Both sides get something of value, like a gift under a tree. The forest people were getting a quality educational program that would benefit the educational community and help teach young people how to think, not what to think, about complex environmental issues. The willingness of AFI to take a gamble and put up some major bucks on a daringly innovative educational program with an untried organization was revolutionary. WREEC members and their agencies were getting a quality educational program that would be good for kids and natural resource conservation. The arrangement enabled us to build the model and network essential to the success of PLT, and later of Project WILD and WET, and to gain a national reputation.

A LANDMARK PROGRAM IS BORN

At our next meeting, WREEC agreed to take on the project, and what came to be called PLT was on its way. Since all WREEC members had full-time positions in their respective states, a program staff was hired. Of the several who applied, we chose Cheryl Charles, a former high school teacher then living in Tiburon, California. She proposed a three-person team: herself, Olina Gilbert, and Jan Rensel. The team would work with WREEC and AFI from Tiburon.

After much discussion, we came up with the basic guidelines to follow in building the materials and program for AFI, beginning



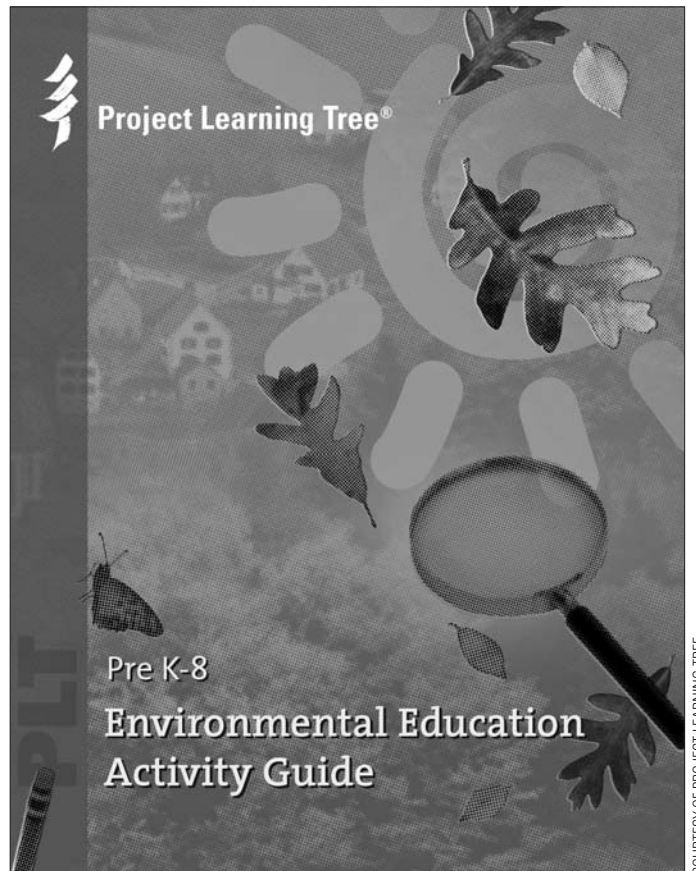
Project Learning Tree's first curriculum guides were introduced by Rudy Schafer and published in 1975 through a grant to the Western Regional Environmental Education Council from the American Forest Institute. One guide for grades K–6 included eighty-two “lessons”; a second guide for grades 7–12 had seventy-eight “lessons.”

with the underlying goal to teach kids how to think, not what to think. They remain PLT's guiding principles to this day.

WREEC members went to work setting up three-day writing workshops in San Francisco, Denver, and Seattle. Their efforts included selecting qualified individuals to participate, arranging meeting places and accommodations, and working with participants on site. Teachers received travel, per diem, and a small stipend to participate. Resource professionals were on hand to assist in making sure that the materials were accurate.

A great sense of camaraderie developed among WREEC members, staff, and participants during these sessions, along with pride in being part of an important educational program. Their enthusiasm soon spread, and we started getting letters and inquiries about the project. We were in effect building a market right along with producing the materials. When the study guides were finished, we had hundreds of people waiting to put them to work in the classroom. PLT was definitely a project for the benefit of youngsters in the western states, and eventually the nation as well.

Somewhere along the line, June McSwain took over the PLT staff position. June was a conscientious person who kept PLT on track during its early years, making sure that all *i*'s were dotted and *t*'s crossed. She was also devoted to WREEC and participated in our activities even after retirement.



Throughout the years, Rudy Schafer continued to help guide and create Project Learning Tree curriculum. Most activities from the early editions are still a part of PLT's current guides but with some added features. At the core of PLT today is the PreK–8 Environmental Education Activity Guide.

Staff and WREEC members put much effort into building the materials. Drafts from the writing workshops were read and reviewed by WREEC members and field-tested by teachers. The materials were reviewed again, modified, and field-tested by other teachers. Gradually, we came up with learning activities that we felt would be of great value and utility to teachers and their students.

Not only did we work on content, but also on the format, elements of which are still in use today. Each activity began with a section on what subjects the activity addressed, which grade levels it was suitable for, materials needed, suggestions for extending the experience, evaluation, and other factors. Artwork and photos were found or created, an attractive cover had to be designed, and an appendix was needed. A draft version was produced and further reviewed. At last, the final version was ready. By spring 1976, we were ready to begin implementation. The introductory pages in our first edition list several hundred agencies, departments, associations, and individuals who had contributed.

PLT GOES FROM REGIONAL TO INTERNATIONAL

Arizona, California, Colorado, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming were the first to set up PLT programs and support mechanisms. Eventually all thirteen



COURTESY OF RUDY SCHAFER

Early success for Project Learning Tree brought recognition from President Ronald Reagan. In June 1985, Rudy Schaffer and PLT were presented with President Reagan's Private Sector Initiatives Award.

WREEC states joined. State agency or private funds were allocated to purchase the guides, provide staff to administer the program and train teachers, and otherwise implement the program. It was a success from the start. Soon, the first of many thousands of teachers were bringing the results of our good work to their students.

By 1977, five non-WREEC states and one Canadian province were added to the PLT network. By 1984, some 75,000 teachers or youth leaders had attended a PLT workshop. The program continued to grow over the years, and now all fifty states and several foreign countries are using PLT.

Soon after PLT became operational, a steering committee of educators, forest industry professionals, and a WREEC representative was created. There were two committee chairs: one working in education and one in forest resources. I served for several years as chair of the educator end of things. The committee provided valuable ideas, services, and assistance and continues its service to PLT and its vast network of users and supporters.

I worked with some great people on the PLT Planning and Advisory Committee. Just a few of the many come to mind. Jim Webster was an archetype Texas good old boy. He was blunt and witty but could cut through competing arguments (he would have called them BS!) in any situation to come up with a reasonable and practical solution. Dave Mumper was another productive member. His position with the Weyerhaeuser Company involved working with community organizations, and this exper-

tise proved useful. Lou Iozzi was a Rutgers professor and is still doing important things as an American Forest Foundation (AFF) Board of Trustees member. Lou, also a competent jazz musician, and I became good friends and still keep in touch.

June McSwain retired from AFI, but her involvement with WREEC did not end. She attended our meetings at her own expense and helped us in many ways. When WREEC went national as CEE (Council for Environmental Education), the organization voted to bestow two honorary life memberships. One went to June, and one to me.

After just a few years, PLT's success made the position of program director most desirable, so there was no shortage of well-qualified applicants when AFI announced an opening for a new director in 1985. The committee narrowed the list down to a manageable number to interview. We were all taken immediately with Kathy McGlaulin. It was evident that she had the knowledge, skills, and experience to perform well. But what we saw as more important was her "people smarts" and energy. In our view, she had what we needed to take us to even higher levels of accomplishment and service. There were other excellent people competing for the position, but Kathy was our first-ballot unanimous choice. We never regretted it. Now senior vice-president for education of the American Forest Foundation, Kathy has taken a first-class program and moved it ahead light-years.

WHAT WE LEARNED FROM DEVELOPING AND IMPLEMENTING PLT

In addition to ongoing program services, PLT added new features, such as annual meetings for state coordinators, new study guides for a secondary school audience, and a website. The elementary materials have been revised several times, most recently in 2006. PLT has been the recipient of many awards and serves as a landmark development in the field of EE. Here are some of the lessons we learned along the way:

- Noneducational agencies and associations are better off working with educators to produce programs and materials. Our motto, "Teaching kids how to think, not what to think," has served us well. PLT has received high marks from a wide variety of educators and organizations for the quality of its materials, its educator network, and the competent professionals with which it is associated.
- Every good program must have an implementation plan. Grinding out materials in seclusion and waiting for the world to come to you is a recipe for disaster.
- Those who are to use the materials must be trained if the program is to be maximized. We know from studies that this personal involvement and enthusiasm go directly to the classroom and pay off over the years.
- Good and usable materials are best produced by those who use them. All PLT materials went through a process in which they were written, tested, retested, and perfected to a high degree. We could say from the start that we had a quality program that would work at the "nine o'clock Monday morning level" in the classroom. Working with on-the-job professionals also helped build interest in the program.
- Recognition for those involved in development, implementation, and other phases of the program builds morale, which

results in more effective services to those we are trying to reach.

- Supplementary materials providing good learning experiences in a variety of subject matter fields related to the ongoing educational program are more useful and adaptable than structured study programs.
- PLT is not a finished product. Testing, getting user feedback, upgrading and redoing the guides, as well as producing new materials and expanding our outreach, is a continuing process.
- Evaluation and research have and continue to be an important consideration in monitoring and improving the program.

THE OLD WREEC FADES INTO HISTORY

By the early 1990s, WREEC's work had become national and even international in scope, which required sophisticated and broad-scale management. Our sponsors strongly urged us to change our structure to bring people and expertise from other parts of the country into the direction and administration of the program. At our 1992 meeting in Yellowstone National Park, we reluctantly agreed to do so. The old hands-on regional days were over. Many of us "old-timers" who had been a part of the glory days of WREEC and who had worked and played together and done some really significant things hated to see this happen, but life goes on.

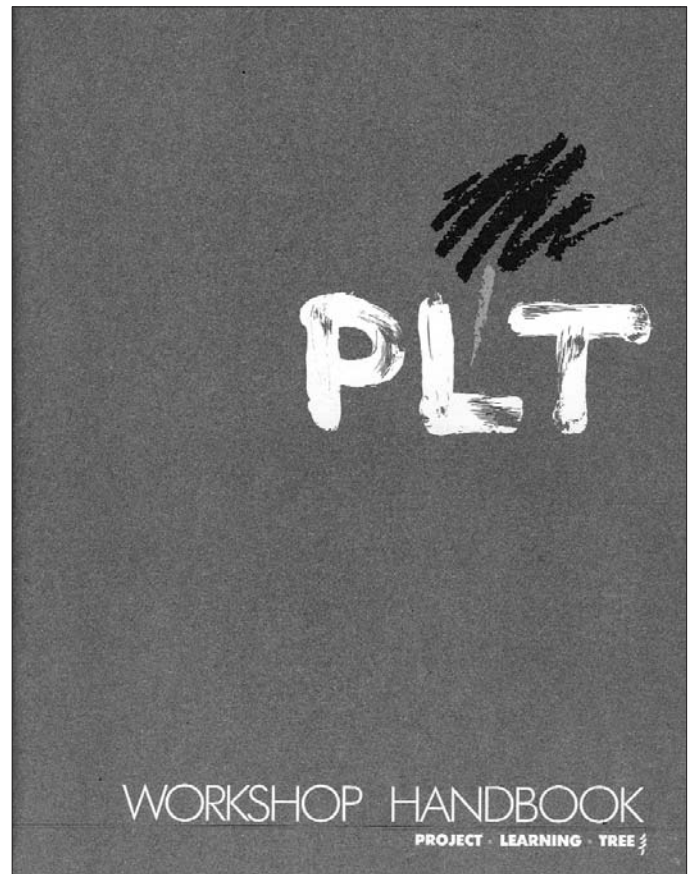
The last meeting of WREEC was held in Portland, Oregon, in 1993, at which arrangements were made to transfer direction of our affairs to the Council for Environmental Education (CEE). The WREEC organization, its membership, annual meetings, and wonderful camaraderie became history. Although gone from the scene, WREEC still exists as a legal entity as a nonprofit organization in Idaho. It would involve too much expense and paperwork to dissolve the organization and reincorporate it. CEE is doing outstanding work, and we can expect great things from the organization in years to come. I serve on the CEE board and provide such assistance as I can, as well as serving as the institutional memory of the organization. Chronicling the story of CEE will be done some day, but not by me. I'm enjoying retirement too much.

FINAL THOUGHTS AND OBSERVATIONS

Some people learn all they know through firsthand experience. This can be an expensive, time-consuming, and an even hurtful process. Others try to learn from the successes and failures of others—a much more efficient means. But if you use the latter method, don't let it thwart your creativity. Remember, somebody has to do something for the first time.

Here are a few things I learned along the way, some firsthand, some from others. I trust that at least a few of them may be useful. Feel free to use any or all if they meet your needs. As my friend Larry Wiseman, AFF president, once said, "I will attribute your observation five times. After that, it is mine."

- You don't have to be a brilliant intellectual to do really important things. I'm living proof of this.
- Everyone has at least one or two good ideas during their lifetime. They usually let others talk them out of doing something about them or lack the perseverance to move ahead. Remember, do it! If it's right, the money will come.



COURTESY OF PROJECT LEARNING TREE

Project Learning Tree workshop handbook, from 1986. The words and images found inside represent some facilitators' experiences conducting workshops and suggestions for others. Its chapters include "Choosing PLT Activities," "Presenting PLT Activities," "Pre-Workshop Publicity," and "PLT Principles." It represents one of the first available "facilitator's handbooks."

- It is far easier to say you're sorry and grovel a bit than it is to get permission.
- A good deal is like a Christmas tree. There's tinsel on the tree, pretty ornaments, and a star on the top that represent goals, ideas, and dreams. But what everyone looks for is the present under the tree with their name on it. A good Christmas tree has a valuable present for each party involved.
- If you are writing a grant proposal, don't come on as a loser. "If we don't get this money, our mongoose adoption center will have to close," or something similar, is an immediate turnoff to grant readers. Grantors want to fund winners that will reflect favorably on their good judgment—not losers who could make them look bad.
- Respect turf. The shutters come down hard when you come on as a threat.
- At least once in your life, you're going to be called on to stick your neck way out for something really important. Be sure you're right and then do what you have to do. You'll hate yourself forever if you don't.
- Try to make the people outside of your organization with whom you work look good to their superiors. A letter of praise to such a person's boss can be pure gold.

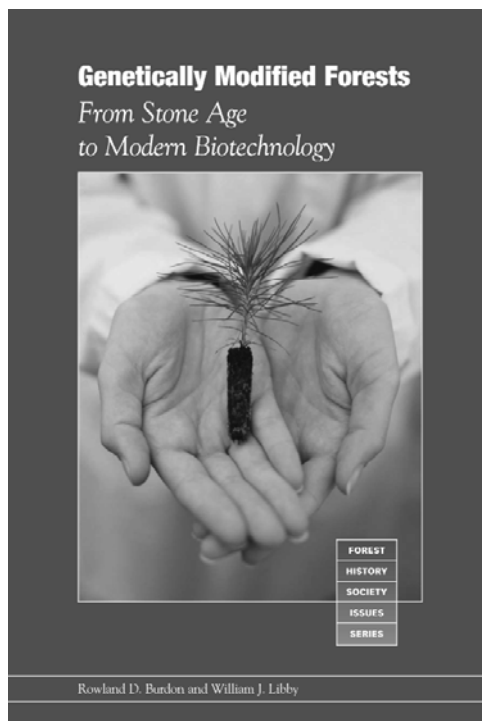
- If you are working for government, seek out and get help from the staff people of elected officials. Most of them know more than their bosses, can give you good information, and often help you get the things you need.
- An impressive job title, a carpeted office with a large wooden desk, a couch, lots of people saying, “Yes, Sir/Ma’am” and “No, Sir/Ma’am,” and other perks are not what life is about. If you are a creative person, you need to learn to protect yourself and, if possible, make your boss’s mantra work for you. It hurts sometimes, but letting your boss take credit for something you did can pay rich dividends.
- If you are managing a program, learn to write an interesting press release and make friends with someone at your local newspaper.
- If you’re in government, don’t screw up on a slow news day.
- Having taught sixth-graders, I find that working with adults is not all that different. Respect them, encourage them, help

- them gain successes, and they will perform.
- If it is to survive, an organization has to do something or produce a product that someone will pay for. No one is going to fund meetings for people to discuss matters of little consequence to the real world.
 - Funding sources like to see a visible product with a potential of being valuable to many people. I coined the word *thinker* to describe a guide or similar product that would go “think” on someone’s conference table when the project ends. WREEC was successful because, among other things, we produced some great thinkers. □

Rudy Schafer was the founder of WREEC and PLT. He retired from the California Department of Education in 1987 but remained active with PLT, CEE, the National Wildlife Federation, and many other organizations.

Genetically Modified Forests: From Stone Age to Modern Biotechnology

by Rowland D. Burdon and William J. Libby



ISBN: SOFTCOVER: 978-0-89030-068-8 **\$8.95**

The term biotechnology came into common usage in the 1980s. Broadly defined, it is anything that combines biology and technology, but it commonly refers to genetic manipulation of plants and animals. And it has a long history; the genetics of many tree species have been purposefully modified for more than 5,000 years. During the last century, the use of conventional breeding techniques has allowed humans to improve tree growth on some lands and to preserve forests on others. Most recently, genetic engineering has accelerated this potential.

But biotechnology has become more controversial during the last few decades as the level of technology has increased. Few would question the use of genetic engineering if it is used to protect the environment and improve living standards, but there are proper concerns about unintended consequences.

In *Genetically Modified Forests*, authors Rowland D. Burdon and William J. Libby trace the history of tree improvement, helping the reader to understand both human effect on tree genetics and the real and imagined concerns of genetic engineering.

Order online at www.ForestHistory.org,
or call the Forest History Society at 919/682-9319.