

**Jack L. Carter's address on September 8, 2018, at the annual conference of the Native Plant Society of New Mexico, held in Silver City**

Thank you for asking us to participate in this meeting, and providing us an opportunity to visit with so many friends. This is not only a pleasure for Martha and me, but Diane and her husband, John Elmblad, were anxious to join us.

Two Aspects of My Thoughts on this Address:

First: This is a thank you note to New Mexico friends.

Second: I would like to address some special concerns for the past, present and future of the flora and fauna of New Mexico (and in fact at the same time for Arizona, Colorado, West Texas, and the Southwest in general).

Martha and I are so thankful that we spent 24 years of our lives living and working in New Mexico. So many friendships brought great joy to our lives, and this includes so many of you here this evening. Through the Native Plant Society of New Mexico and the Gila Chapter, the Audubon Society, the Upper Gila Watershed Alliance (UGWA), the Gila Resources Information Project (GRIP) and other organizations, we were part of a cadre of citizens devoted to protecting the flora and fauna of this beautiful place. We always found great satisfaction in being with many of you, as we joined together to conserve the flora and fauna that surrounds us. We were brought together around a belief in conservation.

Conservation is the name of the game. Through education programs, workshops, field studies, plant sales and strengthening the herbaria throughout the state, we were conserving the flora of this attractive place. Over time we have seen this work pay important dividends.

The Gila Chapter has grown from a few of us gathered at the old Carter House, in the kitchen, where six or eight of us would gather to discuss conservation subjects of mutual interest. Field trips or evening lectures started with as few as eight or ten friends, and grew to as many as 20, 30, then 40 or more, all studying together. We drank a lot of coffee and destroyed so many cookies, but we recognized that our objectives were extremely similar. They revolved around conserving this place where we lived. At the same time, we found friends in the colleges and universities, and the state herbaria and other chapters throughout New Mexico to join with us.

In achieving my personal objectives there were those students who worked with me, to assist Martha and me in becoming more familiar with the flora of New Mexico and the surrounding states. We were continuously collecting, identifying, pressing, and mounting new specimens for the state and local herbaria.

At the time we moved to Silver City I had no intention of extending my background in publishing. Six or seven years were enough with the BSCS, Biological Sciences Curriculum Study, devoted to textbooks, laboratory manuals and films. Of course I was retiring. But it didn't work that way.

It was literally the enthusiasm and questions raised by these outstanding students who were some of the best students and faculty in the biology department here at WNMU. The students found their way to our home, joined me on field trips, and assisted me in establishing my small herbarium, which grew to almost 6,000 collections and 350 species.

The questions these students raised told me they were getting the picture, and Charles Darwin would have been pleased. All of this started us down the path to first teaching the students to use the botanical literature and the dichotomous keys, and then demonstrating how variation among species provides a basis for understanding evolution.

And finally, we, with Martha's assistance, were writing keys, looking for good photos and illustrations, which many of you provided. And we had a distinguished person in Sarah Johnson who understood layout. All those who joined us were students of botany even if they didn't know it. At the same time, I always had a weakness for smart people and these were some of the best.

With so much good assistance and enthusiasm we could not miss. From that first book to the second and the third, they were a success because we were all committed to excellence, and there was a market for the product. There are many people here this evening who contributed to these publications and many of you have made use of these materials.

And on top of all this, what fun we had.

In those early days, many members of the local Gila Native Plant Society didn't know there existed a Native Plant Society of New Mexico. From the Gila prospective there was little or no communication throughout the state. I do recall the years while Martha was president of the Gila Chapter that she made it her major objective for the Gila Chapter to become an active part of NPSNM.

I didn't really think she could make it happen, but she did. The way she made it happen was rather shocking for me. At a board meeting of the NPSNM she informed the state organization that the Gila Chapter would like to be the site for the next Annual Meeting. When we returned home it did come as something of a shock to the members of Gila Chapter. At the same time, when Martha brought the word home, the Gila Chapter developed a marvelous program for more than 150 participants. The truth of the situation was that many members of NPSNM wanted to learn more about this beautiful corner of NM.

Recalling this situation has allowed me to reconnoiter (an old U.S. army term) the path we have followed.

We have seen long-term growth in the several separate chapters, and Martha and I, still today, look forward to each issue of the Newsletter. The NPSNM is a much stronger and more effective organization today than it was when Martha and I moved to Colorado two and a half years ago. Older members and many new younger members are joining together to study the flora and fauna of New Mexico. We have seen endowment funds grow. Support for the herbaria has increased, as have funds for undergraduate and graduate studies, and elementary and secondary programs are available.

Today the native plant societies in many states are developing a much better record for addressing conservation issues from a larger perspective because they have learned to work in their local community to assist individuals and other organizations in addressing short-term as well as long term problems. They can assist the individual gardener in planting native plants that will survive and make environmental sense, and can better inform a mayor and city council concerning city-wide parks and gardens. We are all discovering that 5 lawns, 10 lawns or 50 lawns altered to inhabit native plants can

provide large areas in our smaller towns and cities that can become areas of natural beauty.

As the larger society comes to understand the changing demands on the environment, the limits on water, the problems of air pollution, and the value of more natural habitats to a wide range of organisms, members of the native plant societies are becoming better prepared to address these problems.

The challenge to the manicured lawns as described in housing developments and homeowner associations in recent years, has been extremely interesting to follow. Homeowners associations have had old rules concerning the appearance of lawns with bluegrass, several introduced trees and shrubs, and requiring every homeowner to adhere to neatness rules with regular mowing, fertilizing and watering, etc. As a new generation of well-educated families join the homeowners associations, there is a demand for more natural lawns that will require a more natural flora, less watering, and a recognition that this is as attractive as a very different flora and fauna.

Vegetation that offers a rich habitat for our fellow creatures isn't what past generations of *Homo sapiens* have considered attractive. This is the kind of conflict native plant societies can assist in solving. Native plants are not only attractive, but they provide homes for a much wider community of plants and animals.

I am even more convinced today that the state native plant societies throughout the United States are providing new hope for the future of the flora of the nation. They are filling the gap between the larger society and the flora. And this has brought a new generation of members to the native plant societies. Families with young children want to participate in the conservation of planet earth.

Why do I believe this?

City government and elected officials have little understanding of the relationship between ecosystems and economics. State and federal elected officials are failing for the same reason. They are extremely shortsighted, and only able to address problems at the tip of their noses, or until the next election.

As the education system throughout the nation has failed in our schools, colleges and universities, to meet their obligation in teaching the plant sciences, the nation suffers from serious plant blindness. At the same time a larger segment of the population is recognizing their limited knowledge of the earth's flora and the connections among plants, birds, insects and humankind on planet earth.

Whether we like it or not, the schools have removed the green plant from the curriculum. The concept of the ecosystem has been lost not only in the schools, but also from most universities. Botany departments in most of our colleges and universities are a thing of the past, yet there are some professors of botany in these newly formed biology departments.

In a study of just three public schools in Colorado, graduating seniors had no idea in what life zone they had lived their lives, and most of these students could not name ten plants or birds that lived with them in this life zone. At the same time, it is important to note that students raised in rural communities were better informed on these subjects than city youth.

Many biology majors who, upon graduation, become teachers in our colleges and universities, are not prepared to take a class of 15 or 20 students on a field trip to study the flora that surrounds them and teach the role of the ecosystem.

Each year the state of Colorado has what they have identified as a CAST conference (Colorado Association of Science Teachers). Each year the Colorado Native Plant Society (CoNPS) has participated in this conference by having a booth and presenting a program. Approximately 500 science teachers participate in this conference, with roughly 150 to 200 biology teachers attending.

A short questionnaire tells the story and identifies the problem. Our data indicate that approximately one in 10 biology teachers feel qualified to take a group of students on a field trip in the vicinity of their school and teach the local flora. About one in 25 or 30 teachers overall feel qualified to lead these trips, and these teachers are usually over age 50 or 55. Young teachers are quick to admit they never completed a field course while in college, and they were never expected to participate in teaching a field experience. At the same time when they visit the CoNPS booth most will express interest in completing a field botany course.

So what is the role plant societies must continue to fill and strengthen?

As the world's human population comes to recognize the connections among green plants, humankind, and the future of all life on earth, native plant societies must increase their role.

Our chapters are the connections between those who live in our neighborhoods and the scientific and academic community. We are the folks who have the potential to take the nation on their first plant walk, and help them to better understand the ecosystem that surrounds them. We must expand native plant sales in our communities, towns and cities that will reveal the natural beauty of native plants.

We must assist the society in becoming knowledgeable of the ecosystem in which they reside:

We can assist them in selecting native plants for their property.

We can assist families in making decisions concerning water conservation.

We can assist them in selecting plantings that are important to local insects, pollinators and birds.

When we plant a native plant on our property that provides a home for native insects and butterflies and nurtures them, or when we establish a birdhouse, all this sends a message.

We can present workshops and lectures for those who have never planted a garden of native plant species, and then assist them in planting native plants.

There is also a political role to play in the communities in which we live:

We are the organizations that are capable of connecting the value of the native flora and fauna to the politics of the day.

We have a role to play in challenging political figures to identify where they stand on those issues that are important to conserving the flora and fauna.

We can encourage men and women who have a strong interest in conservation and politics to seek a political office.

We are the caretakers. Conserving the place where we live, in caring for our personal property, protecting the flora and fauna of Grant County, and every county in the State of New Mexico, provide a real challenge.

We all have a job we can do. There is a job for everyone in the realm of conservation. In a meeting of the CoNPS some months ago, while just sitting and listening, I counted over 20 opportunities that our membership could fill. From gardeners, accountants, fieldtrip leaders, investment bankers, photographers, artists and the list goes on.

One of our toughest jobs is educating government officials to understand what it means to protect Planet Earth. They must be taught that “Earth First” was extremely meaningful 50 years ago, and it makes even better sense today.

As the human population expands worldwide, our cities and policies are threatening our native lands so much that native plant conservation needs to happen even on top of buildings. That is a major reason why activists in the City of Denver focused on environmental conservation and passed the Denver Green Roof Ordinance. Yes, I literally mean growing plants over our heads!

Through participation and kindness the native plant societies can encourage our members to reach new levels of success. The role of kindness and helping the less fortunate, be they plants, animals or people has been lost by so many of our elected officials in this political season. Conservation is almost a bad word for many people running for office. This must change.

Martha and I plan to stay in the ballgame we call conservation as long as possible; we may get rained out, or we may get burned out, but we will suit up and do our damndest to win in this most important game.

Thank you for listening.

Jack Carter