

PLANT A TREE AND SAVE A CITY¹

by John R. McGuire

Abstract

American cities need to maintain and improve their natural environment through urban forestry. The role of leading, coordinating, and stimulating an urban forestry program has been given by Congress to the Forest Service, U.S. Department of Agriculture. The action role, however, for urban forestry must remain with those who can do the best job—the States, cities, and private industry. To be successful, an urban forestry program must be closely tied to a related fields. Finally, an urban forestry program can be successful only through very close cooperation of all sectors—the Federal agencies, State and local governments, universities, professional organizations, and private industry.

Today, I'm taking off my forester's hat to represent the Department of Agriculture, as well as the Forest Service. Although it's certainly not an easy task to speak for the score of agencies within the Department, I do find that we are all striving for the same goal, a better life for all Americans through utilization of this Nation's natural resources, whether they be fields or forests. Whether it's agriculture, forestry, or a host of related disciplines, we are all engaged in protecting and efficiently utilizing the natural resources that have been bestowed on us. And, certainly, to the North, Canada is striving for the same goals. While my remarks today are directed specifically to the United States, I think they could pertain to Canada as well, because our two countries share many things in common: a bounty of natural resources, a high standard of living for our people, and, some of the same problems as well, problems with our natural resources and problems in our cities.

Today, I'd like to take an overview and discuss an area that affects and concerns all of us, whether we're arborists, landscape architects, foresters, or professionals in related fields. I am referring to urban forestry.

Recently, terms such as urban forestry, or the environment, or ecology, have been bandied about and consequently have come to mean many different things. To make sure that we're

on the same track, I'll define urban forestry as "a branch of forestry that has as its objective the cultivation and management of trees for their contribution to the physiological, sociological and economic well-being of urban society".

As I see it, urban forestry encompasses several basic issues:

1. American cities need to maintain and improve their natural environment through urban forestry.
2. The Federal Government must assume the role of leading, coordinating and stimulating an urban forestry program.
3. The action role for urban forestry must remain with the States, cities and, most of all, private industry.
4. An urban forestry program must be closely tied to a related research program.
5. And, finally, a viable urban forestry program in this Nation can only be successful through very close cooperation of all sectors — the Federal agencies, State and local governments, universities, professional associations, and private industry.

One only has to look at this Nation's cities to realize that today's dream of urban forestry has become tomorrow's reality. Our cities must maintain, and in most cases improve, their natural environment. Three-fourths of the U.S. population live in urban places. Sixty-six million of these people are virtually locked into cities by poverty — and many of them have very little chance to see trees outside the urban setting.

Some children do not recognize any environment beyond concrete sidewalks and wire fences. One study, conducted by George Washington University and the Forest Service, showed that many urban children are afraid of forests. This is how alien Nature has become to

1. Presented at the International Shade Tree Conference in Detroit, Michigan in August, 1975.

some Americans.

And, like the mountain and Mohammed, if the city dwellers cannot, or will not, come to the forests, then we have to bring the trees to the city. Opportunities in urban forestry range from rather large-scale projects such as watersheds, city forests, parks and greenbelts, to unpaved portions of street rights-of-way, a resource that has often been overlooked.

I'm not saying that trees, shrubs, and appropriate landscaping will solve all urban problems, but they can help. To those who say that our cities are dirty, I say that trees reduce air pollution. To those who say that our cities are noisy and uncomfortable, I say that trees absorb noise and control climate. And to those who say that cities are ugly, I say that trees can beautify our cities, make them harmonize more with Nature, and screen off structures which may be unsightly, but are very necessary to our modern way of life.

For centuries, many European countries have embraced urban forestry, although they didn't have a name for it. The city forest of the Hague, Holland, for example, dates back to the 11th Century. Today, it still serves the citizens of that city, and even provides timber as well.

Americans, too, have expressed strong desires for trees in their cities. As soon as the early settlers had chopped down the trees for towns and fields, they started planting more trees. The Arbor Day movement has been popular for many years.

Many States and cities are already doing a fine job of urban forestry, and have been doing a fine job for many years. The natural environment is evident in the tree-lined streets of small New England towns, or in the vast network of urban parks found in many metropolitan areas.

Here in Detroit, there are excellent examples of arboriculture at its best. Many other cities also devote a great deal of attention and money to urban forestry. For example, Chicago spends \$10 million a year on urban forestry. San Francisco has done an excellent job of utilizing many tree species amenable to its warm climate to make the city one of the most attractive in the country. Georgia, Kansas, Missouri, and

Florida already have excellent programs of urban forestry.

Yet, there's so much room for improvement in most of the Nation's 20,000 cities and towns. Each year, urban dwellers in essence vote on the condition of our cities. The voting does not consist of dropping a ballot box. It consists of choosing either to remain in the city or move away. During the '60s and '70s the vote has been negative, with a continuing trend away from metropolitan areas, as many people leave not only the inner city, but suburbia as well.

I think urban forestry can help make our cities healthier and more pleasant places in which to live and work. Yet urban forestry needs some very strong backing before it becomes a universally-accepted reality.

To spread the concept of urban forestry, we must convince "the powers that be" of the benefits, indeed, the necessity, of urban forestry. Agencies at all levels have to justify the expense of urban forestry, which by itself brings in no revenue. The budget squeeze is especially tight in some of our major cities. It will take some major rethinking — and realignment of public values before places such as the "bankrupt" New York City can consider new, major expansions in urban forestry.

All the responsibility does not fall on States and cities. "The powers that be" also include private developers who may not feel that trees and landscaping increase the value of their houses, apartments, and shopping centers, whether they are within the city limits or outside in suburbia. Actually, I once heard suburbia described as a place where developers bulldoze out the trees and then name the streets after them. Although this exaggerates the situation, developers do need to know that trees not only beautify a landscape, but can also control climate, and reduce air and noise pollution. Incidentally, one study showed that trees can increase a home's value by as much as \$7,000.

Since urban forestry efforts vary so greatly, one organization must have responsibility for leading, coordinating, and stimulating urban forestry throughout the Nation. One agency has already been given this responsibility. In 1972,

Congress passed an amendment to the Cooperative Forest Management Act of 1950, and gave the Forest Service, through the Department of Agriculture, the responsibility for an urban forestry program. Congress authorized an appropriation of up to \$5 million for the program, but has not yet provided appropriations to fund it. The House has proposed a \$1 million urban forestry add-on for the fiscal year 1976 budget, but the Senate has not yet acted on this measure.

This does not mean that the Federal Government is going to take over activities that rightfully belong to the States or private industry. The Federal Government would provide technical assistance only, through the State Forestry organizations. The action must remain with the States, cities, and, most of all, private industry. A national urban forestry program would generate a great deal of business for private firms. In fact, the congressional authority states that the program will be "carried out in such a manner as to encourage the utilization of private agencies and individuals furnishing services" needed for urban forestry.

At the moment, the Forest Service does not have the funds for an urban forestry program. But I am confident that it will in the near future, if not for 1976, then for 1977.

You, as well as other groups and individuals, will now have a chance to formally express to Government your views on the direction urban and community forestry should take between now and the year 2020. In compliance with the Resources Planning Act of 1974, on August 15 we will release for public comment drafts of a long-term Renewable Resources Assessment and Program. This program will include alternative levels for Urban and Community Forestry activities. After the public has had an opportunity to comment, we will, on December 31, submit to the President for his recommendation to the Congress a long-range renewable resource program. We hope you, and all concerned citizens, will take advantage of this opportunity to make your views known.

No matter what level of urban forestry activity we have, it must be tied to a closely interwoven program of research. There is already a

foundation of research in urban forestry and related sciences from Federal and State agencies, universities, and private industry. However, more needs to be done.

Many citizens and scientists are concerned about our urban environment. Public and private agencies are studying bits and pieces of the complex ecosystems that make up our environment. However, there is no focal point of concern where the environmental problems confronting urban dwellers can be researched, and from which results can be applied to improve the well-being of America's urban population. A national urban forestry research program is needed, to find ways of better utilizing trees to make the Nation's cities healthier, more pleasant places in which to live and work.

Not only must new research projects be initiated, but the results of past, present, and future projects must be quickly made available to working professionals and laymen as well. It's often said that the gap between research results and application is seven years. If our cities are to survive, to become pleasant, habitable places for human beings, then we must close this gap.

A great deal of research in arboriculture and other sciences related to urban forestry is being done in the Agricultural Research Service in the Department of Agriculture. I'm sure all of you are familiar with the research in developing superior shade trees and shrubs now being carried on in a major ARS facility, the National Arboretum, in Washington D.C.

Likewise, much of the forestry research carried on by the Forest Service and various colleges and universities is applicable to urban forestry. But we still need to know more about urban forestry itself. In particular, research is needed in three specific areas:

First of all, we need to know more about the benefits of trees and forests in urban areas. For example, how much noise and air pollution can trees filter out? What kinds of wildlife can survive in an urban forest? Are there any negative effects of an urban forest?

Secondly, we need to know more about the proper selection of trees and shrubs for urban environments. Which species will thrive in most

cities; which are most suitable for shading, noise abatement, esthetic enjoyment, or small wildlife protection?

And third, we need to know more about planning and development methods; how to properly landscape trees on engineered sites such as channeled streams or freeways, how to visually represent alternative landscapes to city dwellers so that they can make informed planning decisions, and how to use city-wide patterns of trees, recreation sites, open spaces, and people. and people.

Our cities desperately need a program of urban forestry. We already have a mandate for the Forest Service to lead and coordinate a program of urban forestry. We know what research needs to be done. It might seem that effective, universal urban forestry is just around the corner. However, this is not exactly the case. Congress still has to fund the program. And, once the program is funded, there will have to be a great deal of cooperation to make the program a success.

Certainly, urban forestry would not have come as far as it has without the support of the National Arborists' Association, the Municipal Arborists' Association, and other members of the International Shade Tree Conference.

We owe a special debt of thanks to the universities which are pioneering programs in urban forestry education — Michigan State Uni-

versity, the University of Michigan, Oklahoma State University, and Southern Illinois University, to name a few.

Cooperation is always an important element in successful research and application. An excellent example is the cooperation between laboratories of the Agricultural Research Service and the Forest Service. The Shade Tree and Ornamental Plants Laboratory and the Forest Insect and Disease Laboratory in Delaware, Ohio, are doing joint research on Dutch Elm disease.

If cooperation has been important in the past, it will be even more important in the future. Urban forestry is only in its infancy, and it will take all our cooperation to help it grow.

Urban forestry is desperately needed. It has come of age. Today, I'm asking you to support urban forestry, and so are this country's 20,000 cities and towns. Together, we can help contribute to the survival of those cities and towns as healthy, pleasant environments for human habitation.

The Forest Service has a little friend called Woodsy Owl, who normally says, *Give a Hoot - Don't Pollute*. Today, I think he might say, *Plant a Tree - and Save a City!*

Forest Service
U.S. Department of Agriculture
Washington, D.C.

ABSTRACT

Baumgardt, J. P. 1975. **When, how to water your trees.** *Grounds Maintenance* 19(6): 11-12, 14, 17.

All living tissues require a constant supply of water. When growing, plants need ample water to supply new tissues. When in leaf, plants use large amounts of water during light hours for photosynthesis and they lose water constantly through leaf pores (transpiration). The soil must contain sufficient water to supply a plant's needs for living processes, for growth, for photosynthesis, and for respiration. Several rules apply when watering trees. First, try to follow the normal pattern of rainfall, making up any deficiencies of the moment. When you water a tree, water deeply. Newly planted trees should be watered about once each week when rainfall is less than one inch. Trees that have been planted for just a few years, say less than five years, need to be watered deeply when rainfall is scanty for two or three weeks. Try to water every older tree on the property at least once each month during a drought.