

# The State of the Trees

Savannah and Chatham County  
Georgia

February, 1992



Written, published, and distributed by the  
Savannah Tree Foundation

The Savannah Tree Foundation promotes, through direct action and education, an awareness of trees, particularly the Live Oak, as a vital natural resource and an important part of our heritage. The Foundation desires to preserve, nurture, and plant trees to enhance the quality of life for present and future generations.

The purpose of this report is to record the state of trees in this community, assess the stewardship of Savannah's and Chatham County's outstanding tree legacy, and ensure that trees are considered a part of the public infrastructure and a vital community resource.

---

# Value of the Urban Forest

The association of trees with beauty is time-honored, and few would deny the aesthetic value of trees in the urban environment. However, there is increasing evidence that trees have direct and positive impact also in matters of physical health, economic growth, public infrastructure, air quality, and conservation of natural resources. Trees play a critical role in improving the natural environment and enhancing the quality of life in any community. Sadly, urban development too often results in widespread destruction of trees, and too seldom is accompanied by adequate replacement plantings to offset the losses. The work performed silently, inexpensively, and steadily by trees is largely ignored, or viewed as incompatible with community progress. The following facts about trees speak eloquently of the contribution they make to the urban landscape.

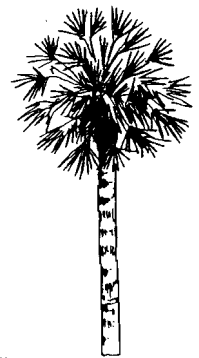
- Property that is wooded and well-landscaped is more desirable than that which is barren and stripped of its trees. This desirability adds value to the property, which in turn increases tax revenues for the community.
- The right trees planted in the right places can significantly lower air conditioning costs in the summer and heating costs in the winter, lessening the amount of fossil fuels burned for energy.
- Tree roots increase soil permeability, thereby reducing soil erosion and water runoff, and decreasing the need for costly sewage and storm water drain systems and water treatment facilities (costs which are borne by taxpayers).
- Development costs can be reduced when tree clearing and soil stabilization expenses are kept to a minimum.
- Trees clean the air and promote good health by trapping harmful particulates and removing gaseous pollutants from the air, and by absorbing CO<sub>2</sub> and replenishing the air with oxygen.
- Trees provide shade and reduce temperatures in the urban landscape, mitigating the "heat island" effect caused by large expanses of asphalt and concrete.
- In both commercial and residential settings, trees soften harsh architectural angles, screen unsightly areas and provide attractive, economical buffers from noise and other invasive elements.
- Trees offer a variety of shapes, colors, flowers and textures that add beauty to the landscape. Savannah's

squares and parks, with their wealth of trees, are evidence of natural beauty being translated into economic vitality through tourism.

An informed public is the best defense against harmful and unnecessary destruction of trees. This community's legacy of trees is one of its most valuable resources. **In fact, the value of the urban forest on the city's public land is estimated to be \$100,000,000. Yet, only about 1% of that value is spent on managing this asset.** Stewardship of our urban forest rests with the people who live here. ■

*"The best time to  
plant a tree  
was twenty years ago.  
The second best time  
is now."*

*Anonymous,  
The Simple Act of Planting a Tree*

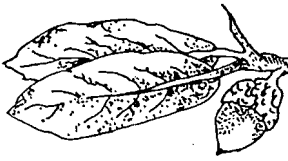


## Public Infrastructure

Trees are as much a part of a community's infrastructure as are its streets, sidewalks, public buildings, utility poles, sewers, and streetlights. Therefore, management of the urban forest and protection of its tree inventory should be a community responsibility, defined and administered by local governmental ordinance.

The existence of separate city and county governments in this community has resulted in two separate ordinances and accompanying manuals, two separate permitting processes, two administrators, and separate tree commissions for the city and the county.

In December, 1988, the Chatham County Commission replaced its first tree ordinance of 1984 with a Comprehensive Land Disturbing Activities Ordinance, which was further amended in February, 1989. The ordinance mandates tree protection in the unincorporated areas of the county, with the **exception of proposed single family subdivision developments** and existing individual single family lots. Specifically addressed by the county ordinance are soil erosion and sediment control, storm-water management, greenspace and buffer area establishment, and tree protection and tree establishment. The ordinance sets forth bonding requirements and penalties



for non-compliance and includes a manual of technical data to assist with compliance. The Director of the Chatham County Engineering Department is responsible for the administration and implementation of the ordinance and reviews permit applications and accompanying documents for disposition. The County Arborist is responsible for reviewing and approving tree preservation and establishment plans of the application.

The Chatham County Tree Commission is a five member board appointed to four year terms by the Chatham County Commission from nominations submitted in turn by five organizations: The Savannah Area Chamber of Commerce, the Savannah Tree Foundation, Savannah Homebuilders Association, The Georgia Conservancy, and the Society of Landscape Architects. The Commission meets quarterly and works with the County Engineer and County Arborist in ordinance enforcement. Members of the Tree Commission serve also as an Appeals Board to mediate problems which may arise between the applicant and the Administrator of the ordinance. **There is no budgeted tree program for planting, maintenance, or pruning in the County.**

Following the County's lead in adopting a tree ordinance in 1984, the City of Savannah adopted in September, 1989, the Land Clearing and Tree Protection

*"Trees are the guardians of water and soil."*

Andreas Feininger,  
Trees



Ordinance, whose provisions apply to all lands within the City of Savannah **except streets in all subdivisions**, single family lots, utility easements, and portions of airports and heliports requiring clear areas.

In its statement of purpose, the ordinance includes prevention of soil erosion and waterway silting, improvement of air quality, and retention of urban aesthetic quality - all provided by trees. The ordinance sets forth specific requirements for tree protection and replanting, as well as procedures for site plan approval. The ordinance is administered by the Director of the Chatham-Savannah Metropolitan Planning Commission (MPC). Applications for permits for land-clearing activities are submitted to the City Development Services Department, which then submits the application package to the MPC for review and approval. The MPC obtains comments and recommendations from the Park and Tree Director. Following approval by MPC, the MPC Executive Director certifies that final plans are as approved by MPC. This lengthy process has been streamlined recently by the appointment of a facilitator in the Development Services Department who coordinates the permit application process between the various city Departments. The main task of this Department is to reduce the number of steps and ease the permitting process for the applicant.

It should be noted that although the city ordinance incorporates bonding requirements, obligations for maintenance of planted trees, and penalties for violations of the ordinance, **the responsibility for field inspections or enforcing the provisions of the ordinances is assigned to no one**; therefore, compliance rests to a large extent on the integrity of the applicant to abide by the approved plan.

The City of Savannah's Park and Tree Department is responsible for all street and park trees on public property, and serves as a resource for city developers, engineers, and landscape designers. Savannah's unusually large number of parks, squares, tree-lined streets and medians assures a full schedule of maintenance and planning for this small department that cannot be adequately implemented. ■

## Common Native Trees of Southern Georgia

Native or indigenous trees thrive in the hot, humid climate of Savannah. Consider using some of these trees when landscaping.

- |                     |                    |
|---------------------|--------------------|
| American Beech      | Pignut Hickory     |
| American Holly      | Red Maple          |
| American Hornbeam   | Sand Hickory       |
| Black Tupelo        | Sassafras          |
| Downey Serviceberry | Sourwood           |
| Eastern Hophornbeam | Southern Magnolia  |
| Eastern Redbud      | Southern Red Oak   |
| Florida Maple       | Sugar Berry        |
| Flowering Dogwood   | Swamp Chestnut Oak |
| Green Ash           | Water Tupelo       |
| Laurel Oak          | White Ash          |
| Live Oak            | Yaupon Holly       |
| Mockernut Hickory   | Yellow Poplar      |

A complete list is available from the Park and Tree Commission or the County Arborist.

# How Do We Measure Up?

## Results of Survey

In order to assess the utilization, effectiveness, and impact of Savannah's and Chatham County's Land Clearing and Tree Protection Ordinances, a survey was formulated by the Savannah Tree Foundation. The survey was mailed to local businesses, professionals and other groups whose work might be affected by the ordinances. These groups fall into our four major categories:

- I. Builders and Developers
- II. Architects, Engineers, Landscape Architects and Designers, Nurserymen
- III. Public Works and Utilities
- IV. Governmental Bodies which participate in administering the ordinance.

Response to the survey was strong and enthusiastic and revealed the perception within this community that trees are important and need protection. The need for continued education about urban trees and their values was also evident. The survey revealed as well that adequate protection is still not provided for urban trees.

All respondents of Group I were aware of the tree ordinances. Only one of the respondents felt that the tree ordinances affected their business. Responses varied from "rarely" to "yes" when asked whether as developers they work with the utilities to avoid tree cutting. All respondents felt that they attempted to protect trees during construction. In promoting a healthy urban forest, the response ranged from excellent to moderate to room for improvement. All requested additional information and education on urban trees.

All eleven respondents of Group II were aware of the ordinances, and most worked within the guidelines in developing site plans. Eight of the respondents work with city, county, and utility representatives to save trees and reduce negative impact to trees during construction. However, nine respondents indicated that no follow-up care is provided after planting. All of the respondents desire assistance from Savannah Tree Foundation with continuing education opportunities.

From Group III, surveys were completed by Savannah Gas Co., Savannah Electric & Power Co., Cablevision, Inc., and Southern Bell. All utilities were aware of the tree ordinances and work with the city, county, and state to obtain necessary permits. The tree ordinances affect the business of all respondents who implement target-

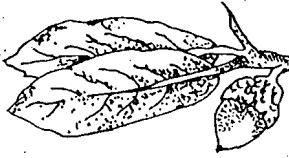
pruning, trenching, protection during construction, and tunnelling. In promoting a healthy urban environment, this group rated themselves both excellent and moderate. They also requested additional educational materials as well as educational seminars. A Joint Utilities Committee was mentioned as a way to explore common problems and solutions for reducing the impact to the trees when installing underground and aerial cables.

From Group IV, surveys were completed by the Metropolitan Planning Commission Staff (MPC), the city's Park and Tree Department, and the Chatham County Arborist. All three have appointed commissions of citizen volunteers supported by paid staff ranging in size from one employee to fifty-four. The MPC's involvement with the tree ordinance occurs in their review of site plans for most of the development in the community. The Park and Tree Department has direct responsibility for the planting, pruning, removal, and maintenance of trees within the city. The County Arborist has similar responsibilities but must use Parks or Public Works staff or contract services for any tree planting or maintenance activity in the county. All three departments work with each other, as well as with the engineering and inspections departments of the city and county.

*"In our largely urban society, the ability to appreciate trees has become dulled — the ability to see the wonder in a tree, the magic and the mystery, the indescribable peace and contentment that can fill our hearts when we walk the wild woods."*



Andreas Feininger, *Trees*



# Recommendations

The Savannah Tree Foundation offers the following recommendations based on studies made during our ten year commitment to our community's urban forest and as a result of survey responses. A major concern is the lack of enforcement of the City's tree ordinance.

## To the City of Savannah

- (1) The city government should take immediate and necessary steps to assure enforcement of the City Land Clearing and Tree Protection Ordinance, with clarification on who enforces and implements the ordinance.
- (2) The City's ordinance should be revised to incorporate the following recommendations:
  - The open space requirements should be greater and should be separate from the buffer requirements, in order to alleviate enormous expanses of asphalt and concrete.
  - The language concerning parking lots should be rewritten to insure that required tree points for parking lots cannot be satisfied by only establishing tree points on the perimeter of the lots.
  - Existing trees under 8" in diameter should be assigned higher quality point values than new trees, in order to encourage tree retention.
  - Specimen trees should be identified and protected by the ordinance. Live oaks should be given special consideration.
  - Subdivisions should be included in the ordinance.
- (3) Recent roadway construction has created new spaces for tree planting and medians to be maintained. However, increase in demand for service coincides with a decrease in Park and Tree Department budget and resources. **2.1% of the 1991 city budget went to Park and Tree. Less than 1% of that budget is allotted for tree care and replanning.** Park and Tree's current level of service is half of that needed for optimal cost effectiveness, safety assurance, and tree health. We urge a review of the Department's needs and resources.
- (4) The City's Master Street Tree Plan should be revised and brought up to date.
- (5) The Park and Tree Department should be funded and staffed for an educational component to the community and to schools.

- (6) Immediate measures should be taken by Park and Tree and appropriate city departments to implement a plan to save the declining live oak trees in Daffin Park.

## To Chatham County

- (1) The county government should adopt and budget a tree program for the County which includes a tree inventory, a Master Street Tree Plan, and additional staff as needed for tree planting, maintenance and removal.
- (2) Single family subdivision developments should be included in the provisions of the County tree ordinance.
- (3) Many of the major arteries for the Olympics are in the County. Proper planning and budget considerations in anticipation of roadway beautification, tree planting and care are essential.

## Activities Within Chatham County Which Impact Our Trees

Road Building/Widening  
Housing Developments  
Industrial Developments  
Commercial Developments  
Water Lines  
Gas Lines  
Sewer Lines  
Cablevision Lines  
Utility Poles  
Utility Pruning  
Landscaping  
Sidewalk Construction/Repair  
Chemical Applications to Lawns

*"As far as man is concerned,  
trees are important in  
three respects:  
economically,  
ecologically, and spiritually."*

*Andreas Feininger, Trees*



### To the Metropolitan Planning Commission (MPC)

- (1) The MPC needs a qualified Environmental Planner whose job would ensure:
  - Careful review of all site plans with specific knowledge of which trees should be saved, what protective measures should be taken and review of the varieties and location of any and all new trees to be planted.
  - Overseeing the site during construction to be assured of compliance, with authority to issue a stop work order if necessary, and submitting site visit reports that would become part of the project package.
  - Authoritative input into the issuance of the occupancy permit, based on performance during construction and a final site inspection.
  - Follow-up within two years to assure that retained trees as well as newly planted ones are living. If not, require replacements.

### General Recommendations

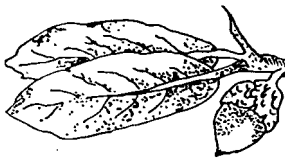
- (1) Trees should be considered as integral to community development (public or private) as other components of public infrastructure such as sewer systems; utility lines, etc. Provisions for trees and their maintenance should be required in all development plans.
- (2) The City and County tree ordinances should be as uniform as possible with respect to language and enforcement.
- (3) All governmental department activities that affect public trees should be coordinated, depending on location, with the city Park and Tree Department or the County Arborist.
- (4) There should be coordination between the Department of Transportation, the Park and Tree Director, and the County Arborist as to who monitors construction around trees during roadway projects.

- (5) More in-house educational opportunities could be provided for the construction, landscape, and utilities industries. These would include technical information on tree physiology and root systems, protection during construction, proper methods for tunneling and trenching, proper species for replanting, etc.
- (6) Community organizations such as garden clubs should assist in monitoring the state of the trees in their areas and provide education to their community on the value of trees.
- (7) Savannah and Chatham County are perceived as having the best Urban Forestry Program in the state of Georgia. Because of this perception, Savannah received the first and third largest "America The Beautiful" funding allocations within Georgia in 1991. We need to ensure the quality of this perception and continue to build our Urban Forestry program.
- (8) When a tree is damaged by accident, construction activity or road building, the cost of its replacement or repair should be recovered from the responsible party. ■

*"Savannah used to be a city  
of large trees;  
now it is a city of  
medium trees, and soon  
it will be a city of  
small trees."*

*Don Gardner, Director  
Park and Tree Commission*





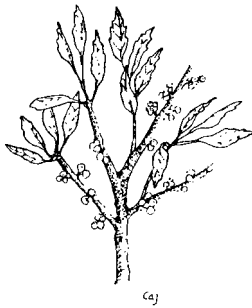
# A History of Savannah's Trees

Savannah's giant oaks and lush magnolias appear to have been here forever, but the city's rich urban treescape is the result of careful municipal planning which began in the days of Oglethorpe. Mulberry trees were among the first trees imported to Savannah for silk production by the English Trustees. Although this experiment didn't work, the mulberry tree remains a symbol of Savannah's history.

As the city prospered through the cotton trade, public landscaping began to reflect its prosperity. In 1810, Robert Mackay noted that the squares had been fenced and planted with Bermuda grass. In 1829, a city ordinance authorized the Street and Lane Committee to plant trees between Bay Street and the River Bluff, and between Lincoln and East Broad Streets. Two years later, the committee was instructed to trim trees throughout the streets and to place benches under the trees on Bay Street and South Broad.

*"In the company of trees, we are able to 'think' — they foster meditation."*

John Stewart Collis  
*Trees, A Celebration*



South Broad, now Oglethorpe Avenue, was distinguished for its double rows of Pride of India trees. These chinaberries, as they are commonly known, were esteemed for their strong perfume, lilac-hued flowers, and dense shade. The artist, Cerveau, shows a panoramic view of Savannah in 1837, with the softening effect of planted shade trees, mostly water oaks, and the pine forest in the background. In 1840, the noted landscape architect, Frederick Law Olmstead, observed, "A broad open common stretched from Harris to Gaston Street where a dense pine forest began."

As early as 1840, City Council was interested in an orderly scheme for planting. An ordinance of that year called for trees to be placed a foot beyond the pavement line and twenty feet from each other. There were many other specifications for different locations. The City Fathers' efforts were appreciated by William Makepeace Thackeray, who ten years later praised Savannah as "wide-streeted and tree-planted."

In 1851, the city adopted an ordinance to create "Forsythe Place" which required cutting into the forest bounding the city. Forsythe Place became a planned city park planted in native trees.

The most significant development for shade trees in Savannah was the ordinance passed by the General Assembly of the State of Georgia on November 30, 1895, which created the Park and Tree Commission. The Commission's first report the following year inventoried 11,063 trees in Savannah — 1,028 live oaks, 2,210 water oaks, 2,045 sycamores, 1,546 elms, 1,101 chinaberry, and 724 mulberry trees, plus 44 other varieties.

The decisions made by that first commission influence Savannah's landscape today. The commission noted in a report, "We believe that the magnificent trio of evergreen, the majestic live oak, the grandiflora magnolia, and the picturesque palmetto, to be the distinct characteristic feature of our flora and should appear at every point of vantage."

The Commission voiced its preferences for the live oak over the water oak because of its long life span and great hardiness. It expressed a desire to plant for the seasons something striking and pleasing to catch the eye in each of the parks and squares and favored dogwood for spring, crepe myrtle for summer, and turkey oak and blackgum for autumn and early winter.

From 1896 until 1908, 9,009 trees were planted. In 1903, a tree nursery was established to insure a future supply of trees. Oglethorpe Avenue was planted during this time, as was Factors Walk and the Park Extension.

In the early 1920's, Estill Avenue was renamed Victory Drive and planted with palm trees as memorials to the fallen soldiers of World War I.

Today the Park and Tree Commission carries on its mandate. Commissioners are appointed by the Mayor and confirmed by City Council for six-year terms. The Commission meets quarterly. The original legislation gave the Commission control of money appropriated by the City for the care, preservation, and management of parks, squares, trees, grass plats, and flowers. In 1977, the Commission relinquished financial and budgetary control to the Park and Tree Department. At the same time, it established a trust for the receipt of contributions and memorials to be disbursed for preservation, restoration, and community education projects. It is the mission of the commission to identify sources of financial support as well as to increase public awareness, to represent the concerns of the citizens in matters of municipal scenic parks and trees, and to advise the Park and Tree Department on such concerns.

The Commission's current programs include Keep America Beautiful, Tree City USA, Arbor Day, Global ReLeaf, and the Tribute Tree Program through which individuals, for a \$200 contribution, may have a commemorative tree planted. The Commission also holds memberships in the Georgia Urban Forest Council and the National Urban Forest Council. ■



---

# The Savannah Tree Foundation

After attending the Second National Urban Forestry Conference in 1982, Page Hungerpiller organized a group of citizens concerned with the destruction of urban trees in Savannah and Chatham County. In 1982, the Savannah Tree Foundation (STF) was formed. Originally funded by an anonymous benefactor, STF receives voluntary contributions from a number of individuals. An annual newsletter covering activities and future plans is sent each year to supporters.

Following is an overview of the organization's accomplishments since 1982.

## Community Projects

Through a conservation easement granted in 1985, STF became the legal guardian of the **Candler Oak**, the largest live oak tree in the historic district. Estimated to be between 250 and 300 years old, this majestic tree has benefitted from the maintenance plan provided by STF, and serves as a symbol for the organization.

STF's first major project was the sponsorship of a workshop to introduce **Project Learning Tree** to Chatham County school teachers. This environmental education program continues today.

Special programs each year on **Arbor Day** have included tree plantings, lectures and workshops by tree specialists, gifts of tree-related books to the public library, and other activities designed to inform the community of the benefits of trees.

STF recently helped coordinate a partnership of seven organizations to apply for federal funding to assist in the beautification of the community in preparation for the Summer Olympics in 1996

## Education

STF has offered continuing education opportunities for builders, architects, engineers, utility companies, garden clubs and others whose work involves trees. Workshops, lectures and seminars on urban tree care and maintenance have brought speakers of national acclaim and expertise to Savannah. In addition, broad audiences have been reached through Arbor Day and Earth Day programs, and through the Project Learning Tree program in public and private schools. STF has awarded prizes for a tree project at the Chatham County Schools' Science Fair.

## Advocacy

STF remains alert to issues regarding urban trees. The Foundation participated in the initiation, drafting and adop-

tion of both the county and city tree protection ordinances. During road-widening projects in the community, especially on White Bluff Road, STF has been a vocal advocate for retention, protection and replanting of trees. In addition, the Foundation has opposed billboards on the Truman Parkway, and was a member of a statewide organization opposing tree cutting in front of billboards on Georgia's Interstate highways.

## Partnerships

STF has working relationships and maintains close communications with various other groups concerned with trees in this community. These include local governments and their agencies, other non-profit organizations, and associations of such trades as homebuilders, architects, landscape architects, and others. STF's membership in several state and national environmental organizations assures that its members stay informed and have access to continuing education opportunities.

Recognition for the work of Savannah Tree Foundation has come both to the organization and to individual board members, who have received numerous awards for their work.

*"We abuse land because we regard it as a commodity belonging to us. When we see it as a commodity to which we belong, we may begin to use it with love and respect."*

*Aldo Leopold, Sand County Almanac*





## **Titles of Books Presented to the Public Library by the Savannah Tree Foundation**

Dirr, Michael A. **Manual of Woody Landscape Plants, Third Edition.** Champaign, Illinois: Stipes Publishing Co. (1983).

Lipkis, Andy & Katie. **The Simple Act of Planting a Tree.** Los Angeles: Jeremy P. Tarcher, Inc. (1990).

Poor, Janet M. **Plants That Merit Attention.** Garden Club of America. Portland, Oregon: Timber Press. (1984).

Shigo, Alex. **Tree Pruning.** Durham, New Hampshire: Shigo and Trees. (1989).

Shigo, Alex. **A New Tree Biology.** Durham, New Hampshire: Shigo and Trees. (1986).

## **Acknowledgements**

The Savannah Tree Foundation wishes to thank the following for their assistance in responding to surveys or otherwise helping in the production of The State of the Trees report.

The Georgia Conservancy, who gave their permission to use drawings by Carol Johnson, **A Guide To The Georgia Coast.**

Beth Reiter  
Kay Cobb  
Erickson Associates, Inc.  
Home Builders Association  
Great American Builders  
Southern Bell  
Savannah Electric & Power Co.  
Savannah Gas Company  
City of Savannah, Water  
Pollution Control  
City of Savannah, Water  
Operations  
Cablevision, Inc.  
Alvin L. Davis, Inc.  
Gunn & Meyerhoff A.I.A.  
Architects, P.C.  
The Park & Tree Commission

Georgia Forestry Commission  
Saussy Engineering, Inc.  
Thomas & Hutton Engineering Co.  
Hussey, Gay, Bell & DeYoung  
International  
W.J. Hunter  
Birch & Associates, Landscape  
Architects  
Lominack Associates, Architects  
The Metropolitan Planning  
Commission  
EMC Engineering Services, Inc.  
John Reiter, Architect  
McWhorter & Associates, Inc.  
Hinesley & Associates  
Chatham County Tree Commission  
Engineering Department,  
City of Savannah

## **Savannah Tree Foundation**

12730 Rockwell Avenue  
Savannah, Georgia 31419

### **Officers - 1992**

President - Page A. Hungerpiller  
Vice-President - Beth M. Glass  
Treasurer - Suzanne H. Williams  
Secretary - Martha R. Rudd

### **Board of Directors**

Catherine Adler  
Lynda G. Beam  
Gwen McKee  
Kacey Ratterree  
Mary Helen Ray  
Bebe Rose  
Simone Van Stolk  
Patricia W. ZeMurray

### **Director Emeritus**

Hans Neuhauser

### **Board of Advisors**

Frank Anderson  
Swann Brannon  
Helen Downing  
Valerie Hinesley  
Richard Knowlton  
Larry Lee  
Karen Matthews  
Elfrida B. Moore  
Lane Morrison  
Sid Nutting, Jr.  
Elliott Simmons  
David Young