

WHAT MAKES A BIG TREE SPECIAL? INSIGHTS FROM THE CHICAGOLAND TREEMENDOUS TREES PROGRAM

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Abstract. In 1995, a local version of the American Forests big trees program (Treemendous Trees) was initiated in the Chicago area by Openlands Project and the Morton Arboretum. In addition to the numerical information about tree sizes required on the nomination form, many participants attached notes and sometimes lengthy letters that detailed various aspects of the nominated trees. A qualitative analysis of these written materials identified a number of recurrent themes that sometimes went far beyond the physical size dimensions to describe aesthetic and functional values, and symbolic and emotional meanings. This information may help urban foresters better understand the breadth and depth of values people have for urban trees—particularly large ones. Results also have implications for obtaining more and better information from big tree programs, and for using these programs as vehicles for developing collaborative partnerships between urban foresters and citizens in knowledge discovery and sharing.

Trees are a vital part of the infrastructure of cities. Beyond providing important physical and biological benefits such as reducing urban heat islands and filtering air pollutants, trees in urban areas enhance the aesthetic quality of the environments where large numbers of people live, work, and recreate (1, 5).

Tangible benefits of urban trees such as cooling and noise reduction can be relatively easily measured. Certain physiological benefits people derive from trees have also been measured. Ulrich (11) found that people who were exposed to images of trees became more relaxed as indicated by decreases in blood pressure and slower heart rates. More emotional and complex values are a greater challenge to identify and explain. These hard to define values may include spiritual values as well as a broad range of other meanings and understandings people associate with trees (6). The assorted connections that many people have with trees are powerful factors that urban foresters and arborists need to be aware of and respect (2).

The deeper values and meanings of trees are especially evident with respect to big trees. There

is something about a big tree that evokes strong feelings in many people (7). This can sometimes make an urban forester's or arborist's job difficult. The larger, older trees most favored by the public may not be the most desirable from a management point of view (8). People may experience grief and anger when, through either natural or human causes, they are faced with the loss of a large tree that is important to them. Alternatively, people's fascination with big trees can give a boost to urban forestry by enhancing people's appreciation of trees, informing people about the important role trees play in urban settings, and providing motivation for citizens to maintain and care for big trees.

Since 1940, American Forests (formerly the American Forestry Association) has maintained the National Register of Big Trees and has encouraged tree lovers across the United States to seek out and nominate the largest individuals of each species for recognition as "National Champions." The state of Illinois started a big tree program in 1962 that was modeled after the American Forests program. The statewide program only considers tree species that are native to Illinois. In 1995, a local version of the American Forests and State of Illinois big tree programs was begun in the Chicago area by the Openlands Project (a non-profit organization dedicated to protecting open spaces) and the Morton Arboretum. Named "Chicagoland's Treemendous Trees," the program's overall goal was to increase public awareness of trees and the natural environment in the six-county Chicago metropolitan region. Program sponsors sent bundles of fliers and brochures about the program to all county forest preserve district offices and municipal foresters in the six county Chicago metropolitan area to be distributed. In

addition, fliers and brochures were sent to the Chicago Park District to be displayed and disseminated at the various field houses. Brochures invited people to search for the biggest of each species of native or non-native tree growing in the area, and send in nominations so the trees could be considered for the Treemendous Trees register. Nominations of non-native as well as native tree species were accepted to avoid the added constraint of requiring people to determine if the tree was native.

The brochure included instructions on how to measure the height, girth, and crown spread of a tree and how to combine these measurements into an overall point value for the tree using the formula developed by American Forests for the national register. The brochure contained a form on which to write all of the information required to evaluate the nominated trees.

Articles about the Treemendous Trees program appeared in several local newspapers, and the response from the public was quite strong. More than 330 trees of nearly 80 species were nominated. The two primary objectives for the program were to inform people about the physical and biological values provided by trees, and to develop a catalogue of the locations of notable trees in the area. However, it soon became apparent that the program also provided an opportunity for urban foresters to learn about the broad range of values and meanings that big trees have for the people who notice and appreciate them.

Although the nomination form only provided blanks for the numerical information needed to evaluate the size of a tree, many people wrote additional comments on their forms and in some cases enclosed lengthy letters describing why their particular tree was important to them. After reading these spontaneous notes and letters and recognizing the value of the information they contained, the urban forester in charge of the program teamed up with three social scientists at the USDA Forest Service research unit in Evanston, Illinois to take a closer and more systematic look at what the Treemendous Tree

participants were saying about the big trees they had nominated.

Methods

After an initial discussion with the urban forester in charge of the program, the three social scientists examined the full set of 330 nominations. In almost a third of the nominations (99 of 330), participants had written notes or letters about the tree they had nominated in addition to filling out the entry form. These comments served as the basis of the analysis.

The scientists carefully read over these comments and independently identified what each saw as the important themes that people had written about. From these themes, a preliminary scheme was developed for coding comments into categories for further analysis. The coding scheme was hierarchical. Major categories described principal themes relating to such things as the physical characteristics of trees, aesthetic and functional values, and comments about the Treemendous Trees program. Subcategories were used to delineate more specific issues related to the principal themes.

The coding scheme was pilot tested on a 25 percent sample of the entries. The researchers worked independently on analyzing the letters and notes, assigning each as many codes as deemed necessary to cover all of the themes mentioned by a participant. After discussing results of this pilot test, the coding scheme was finalized. A few themes were added and redundant themes were combined. Researchers modified their individual procedures to improve consistency between the three coders. Subsequently, each researcher independently coded the full set of 99 nominations. Researchers then met once again to discuss and defend or modify individual ratings where differences still existed. Using this iterative procedure, a final coding of the nominations was achieved for which there was a fairly high degree of consensus.

Results

The analysis resulted in a list of 48 code categories applied to the full set of 99

nominations. This included 5 major theme categories, 18 subcategories, and 25 lesser categories. The number of codes per nomination ranged from 1 to 17, with an average of 4.3. Frequencies for the major theme categories and subcategories are shown in Table 1.

In the following paragraphs, results of the qualitative analysis of the entries are presented. The presentation of qualitative results is organized to parallel the format of Table 1. The five major theme categories are in bold. Subcategories falling beneath each major theme are italicized. Quotes taken directly from materials sent in to the Tree-mendous Trees program are used to illustrate the major theme categories and subcategories.

Physical characteristics. The nomination form included space for participants to provide specific information on the species, tree diameter, height, crown spread and location of the tree. Although the instructions attached to the entry form requested a description of the tree's physical condition, no space was provided on the form itself for this information. As a supplement to the information specifically requested on the form, people often included additional details about physical characteristics of the tree.

The general *condition/health* of the tree was commonly mentioned. Many commented on the tree's good health with the phrase, "the tree is in excellent (or good) condition/health". Poor health, wounds, and damage were also noted.

Table 1. Themes and their frequency of application.

Theme categories and subcategories	n
Physical characteristics	194
<i>condition / health (at the present time)</i>	41
<i>life history of the tree</i>	68
<i>notable physical features /attributes</i>	46
<i>size</i>	39
Aesthetic / functional values	73
<i>positive assets</i>	70
<i>negative attributes</i>	3
Symbolic / emotional meanings	78
<i>ties to individuals and family</i>	22
<i>ties to general history of site or region</i>	24
<i>emotions or feelings about the tree</i>	19
<i>personification of trees</i>	10
<i>tree(s) needing care / protection</i>	3
About the Treemendous Trees program	81
<i>efforts to promote their tree</i>	35
<i>uncertainty/difficulty in describing, measuring, etc.</i>	35
<i>request for feedback on the tree's standing</i>	5
<i>good idea</i>	4
<i>fun</i>	2
Tree enthusiasm	9
<i>interest in / support for trees in general</i>	6
<i>special stationery, etc.</i>	3

“It may have been hit by lightning at one time because the back side of the tree has a huge hollow spot where you could fit 3 or 4 adult people inside, and it is also kind of burned inside.”

“Each year [the tree] loses a number of small branches due to the results of cottony scale disease which infected the tree perhaps 7 or 8 years ago, the result of an insect infestation.”

The *life history of the tree* was another subtheme under physical characteristics that was recurrent. Life history included information about age, maintenance and transplanting, reasons for large size/good condition, and stresses and mishaps. Information on the age of the tree (not asked for on the nomination form) was often provided, although few people seemed to know exactly how old their tree was.

“I’ve been told it’s well over 200 years old.”

“I can only speculate that the tree was planted when the owners settled it or was here when they got here and simply left where it was.”

Some entries gave a detailed history of the maintenance and transplanting the tree had experienced over its life.

“[The tree was] transplanted from a foundation planting ... when the landscaping was redone in 1958 and has grown by itself in a side yard when a mulberry tree next to it was removed in 1988. It received more light and has grown appreciably.”

“The subject sycamore tree is in excellent physical condition for two reasons: (1) It has plenty of space in which to grow, and (2) It receives lots of care. It receives regular watering and root feeding. A few years ago, when all sycamores were affected by blight, it was treated for two years in a row and survived in better condition than other sycamores in the area.”

Stories of stresses and mishaps were also recounted.

“Despite the construction of our building eleven years ago the oak is doing fine.”

“Physical condition is excellent considering it has been on a playground of a junior high and middle school for the last 40 years.”

People made hypotheses about why their tree was big or in such good condition.

“Everything in this old area grows ‘large’. Our border of evergreens, which were to stop at 6 feet, are now 18-20 feet tall. We have 3-4 feet of BLACK dirt in this old farm area.”

“I suspect that the long life and good health of these trees is possibly due to a rich mineral content left in this area by the glaciers during the ice age.”

Notable physical features/attributes of the nominated trees were pointed out. This included comments about foliage/leaves and seasonal attributes.

“Bright pink blooms covering [the] whole tree emerge between late March and late April, even in early May, depending on warmth of spring weather...has golden color at end of October.”

“The large, well-shaped leaves are an intense green, almost fluorescent when sunlight hits them. The leaves do not turn in fall. A generous amount of “helicopter seed” fruit is produced each year.”

Other notable physical features mentioned included the form/shape of the trunk, branches, and crown, and strange or peculiar features.

“If there is such a thing, you could call it a Siamese twin tree, joined at the base.”

[Describing a photo] *“I just wanted to share with you some of the wonderful faces and shapes on this tree. I have never noticed it on any other tree before.”*

“. . . My step grandmother used to have a statue of Mary in the [hollow of the] tree.”

In addition to the physical size dimensions requested on the form, people also discussed the tree's size in their letters and notes.

“Our cottonwood I think is the largest tree in our little town of Elwood. As you drive south on Route 53 toward Elwood you can see it from the highway.”

“We have been told it is the biggest tree on the south side of Chicago.”

“When we moved to Manhattan Road in 1965, the huge oak loomed behind our newly-built home and we were in awe of its massiveness.”

Aesthetic/functional values. The large majority of comments under this theme were about positive assets. Mention of aesthetic qualities was common.

“This is (all year round) the most beautiful (to the eye) tree in DuPage County.”

“This tree measures 189” around and is just gorgeous.”

“We have always wanted to enter it in a contest because of its height and beauty and straight tree trunk.”

Uniqueness or specialness of the tree was mentioned as a positive asset by some. Uniqueness was related to size (also discussed in a previous section) as well as other features.

“I never have seen a tree like it. It’s ancient.”

“There are many large oaks in this area - this one among the greatest.”

“[The utility company] has trimmed all the trees on my street that touch wires except the loving tree. Maybe they, too, recognize its uniqueness and hesitate to disfigure it.”

Other positive assets people reported related to how their tree functioned in providing shade, a home to wildlife, or a place for children to play.

“We love it because in the summertime when it is very hot we can walk into our back yard and feel the temperature drop 10 to 15 degrees. We are sure it is a great air conditioner for our house.”

“The tree is hollowed out. We have squirrels and raccoons living in it which is strange since we are right in the very middle of town.”

“It shades our beautiful backyard and will be a place of endless exploring as our 2-year-old daughter grows.”

The relationship of the nominated trees to the person’s house or property was also written about as a positive attribute.

“I find the “crown spread” just right for our backyard.”

“My son, ... has a new home currently under construction. The new home has been strategically placed so that upon entering the front door of the home, a guest can view the giant oak through the glass French doors on the opposite side. Also the dinette area’s large window is directly beside the majestic tree and its beauty will be enjoyed at every sitting. The house has been built to complement the beauty of the tree.”

Discussions of *negative attributes* included mention of bad smelling berries and concerns about the size of the tree as a potential inconvenience or hazard.

“We can’t sit on our patio or mow the lawn if we let it go!”

“My husband would like to cut back the tree so it doesn’t do damage to the neighbor’s and our house if it falls”

Symbolic/emotional meanings. People told stories and anecdotes about the trees they nominated. Trees were described with respect to their *ties to individuals and family*. This included discussions of the role of the tree in personal memories/reminisces as well as the tree's relationship to family members/family history.

"These trees in northwest Joliet have a very special meaning to me because I grew up there in that house from birth until the age of 12 years old."

"My Dad remembers the tree when he was a boy and would go fishing with my grandparents across from the sight of the tree at the Kankakee river shore."

"One summer, my son and his father attached a huge rope and tire to the tree, and my four grandchildren spent hours upon hours of enjoyment swinging in the shadows of its huge branches."

"I personally remember our swing from one of its branches which my sister and I used daily in 1948. This tree has truly bonded to our whole family."

Some stories about the nominated trees identified *ties to the general history of the site or region* that sometimes included associations with historic sites or buildings.

"This maple is the surviving one of a pair that flanked the entrance to one of the oldest houses on what was the far east side of Aurora ca. 100 years ago."

"Stories have been passed down through the generations telling that the giant oak was used as a marker for Indians and settlers who passed through Braidwood hundreds of years ago."

"Every Saturday and Sunday, the Native American Honor Guard holds a vigil ...just across the creek from my property. One of the men has assured me that many years ago a Native American surely sat under that tree and carved, dreamed, cried, or even prepared for battle."

People expressed *emotions or feelings about the trees* they were nominating.

"We've always been in awe of this beautiful oak and think it deserves recognition."

"I even wrote a poem about my tree."

"When we purchased our home 12 years ago we loved the tree on our front lawn and found that it was planted from a seed by our neighbor's dad."

Suggestions that the nominated tree deserved recognition or tribute was another way people expressed emotions or feelings.

“If my tree is selected, I am certain that it will receive the due respect and dignity that it deserves—not just from my family, but also from the potential visitors, school children, tourists etc., who will have the opportunity to appreciate its grandeur.”

“It’s about time to recognize and really appreciate these ‘old-timers’.”

“It is to honor this tree that we are suggesting it for your tree registry. This is perhaps the only way we will be able to preserve so unique an example of Nature’s creations.”

Personification of trees occurred in some of the writings analyzed.

“We call this oak our ‘Grandpa Tree’...The house we live in is an old farm house built in the 1870’s. The house and tree have grown old together.”

“It has a few “brothers and sisters” adjacent to its location—not quite as old, according to the arborist, but aging with equal dignity and grace.”

“I tell the children in the neighborhood that one [stem] is the mommy, one is the daddy, and the twig jutting out between them is their baby.”

Some people expressed concern about their tree’s need for care/protection.

“[The tree] is in a new subdivision but seems to be on a lot line so they wouldn’t have to take it down to put a house there. I think it should stay. That’s probably why I’m doing this. It’s probably the oldest tree in the New Lenox area.”

“The 207-year-old tree is endangered - wouldn’t it be nice to properly protect it and [erect] some sort of sign/plaque acknowledging its history and worth.”

About the Tremendous Trees program. A number of people’s correspondence related to aspects of the Tremendous Trees program itself. People made *efforts to promote their tree* through validation of the tree by others and by extending invitations to come see the tree. Comments made by experts, family members, and neighbors were reported as testimony to the tree’s qualifications.

“When the care service came to cable & bolt, the owner stated he had never seen a hackberry this large.”

“My dad thinks it’s a winner, he’s had his eye on that tree since he was a young boy.”

“Every time someone comes over they make a comment on the tree.”

“The chokecherry tree in my backyard is the largest my Uncle Dan has ever seen—and he’s 96.”

Many people expressed *uncertainty/difficulty in describing, measuring or photographing the tree* in the course of preparing their nomination form.

“How could I ever measure height, circumference and crown spread? How could I ever obtain a picture since it is so tall and bare at this time?”

“Enclosed are leaves from the tree and several snapshots. Sorry, but we couldn’t figure out the formula for determining the height.”

“I tried my best to measure its height and crown, but alas buckthorn overtaketh.”

A few people made *requests for feedback on the tree’s standing*. Others thought the Tremendous Trees program was a *good idea or fun*.

“Please confirm receipt of this letter, and I would also very much like to compare your tree analysis results with mine! Please contact me after you have finished your examination.”

“This was a great idea to promote awareness and appreciation of our ‘leafy friends!’”

Tree enthusiasm. The final major theme is tree enthusiasm. This was expressed by some people as *interest in/support for trees in general* in their letters.

“Please send my son Ben a listing of the biggest trees. He’s very interested.”

One person talked of several large trees he had come across since he had begun exploring the area in 1953. Other entrants accompanied their tree nominations with *special stationery* or other devices to express their enthusiasm and support for trees.

Discussion

The Treemendous Trees program was established with the dual aims of documenting large trees in the area and increasing public awareness of the role of trees in the urban environment. However, it turned out to be even more fruitful than expected in the knowledge and insight gained by program sponsors and researchers.

From an applied standpoint, response to the Treemendous Trees program was quite valuable in providing a forum for urban foresters and arborists to listen to their constituents. Many of these constituents have developed special knowledge and attachments with trees in their community. Evidence from this study suggests the broad range of roles and values of individual trees, different tree species, and tree communities and ecosystems that may be elucidated through a program such as Treemendous Trees. In the future, program sponsors might benefit even more by including space on the nomination forms to specifically elicit this type of information. Several researchers (e.g., 9, 10) have developed survey instruments that could be used as models for collecting more detailed information on tree values.

The Treemendous Trees program (or other similar programs) can also be a useful way for urban foresters and arborists to share information with constituents and raise awareness about issues managers feel are important. In this instance, people's attachments to big trees could be used as a springboard to encourage better large tree maintenance. In addition, the care of younger trees might be emphasized in the context that taking good care of young trees increases the potential of their becoming big trees.

One of the most astonishing things about response to the Treemendous Trees program from a research perspective was the spontaneous submissions from participants. What led people to write such notes and letters? And why, in a program focused on tree size, did people feel compelled to communicate information about physical health and appearance, aesthetic and functional values and the symbolic and emotional meanings of the trees they nominated?

According to motivation theory, most human behaviors (in this case, the submission of notes and letters) are directed at accomplishing particular goals (4). The goals of the people who nominated their trees can only be speculated here. However, results of research by Vining (12, 13) suggest that emotional attachments play an important role in motivating people to be concerned and take action on behalf of the environment. Perhaps the volunteered letters and notes about large trees provided a good forum for individuals to express their relationship with the environment in terms that were meaningful to them.

Researchers as well as practitioners interested in a more complete understanding of people's relationship with nature may do well by taking advantage of opportunities to examine information like that provided through the Treemendous Trees program. Kaplan and Kaplan (3) have discussed the use of such research in sharing information among people with differing perspectives.

In the spontaneous notes and letters accompanying nominations to the Treemendous Trees program, trees were described in emotional terms, sometimes as if they were family members, unique unto themselves with many stories to tell. It is as if people felt compelled to communicate the idea that a tree's size is more than its diameter, crown spread, and height. A tree's size increases with its importance in memories, its uniqueness, and its special meanings to the people who know it.

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Résumé. En 1995, une version locale du Répertoire des arbres remarquables de l'American Forests a été mise sur pied dans la région de Chicago par l'Arboretum Morton et l'Openlands Project (« Programme sur les milieux à reverdir »). En plus des informations relatives aux dimensions de l'arbre que l'on retrouvait dans le formulaire de mise en candidature, plusieurs participants y ajoutaient des notes, parfois même de longues lettres, détaillant divers aspects des arbres candidats. Un examen qualitatif de ces notes écrites a permis d'identifier un certain nombre de thèmes récurrents qui allaient bien au-delà des dimensions physiques pour traiter également des valeurs fonctionnelles et esthétiques ainsi que des significations émotives et symboliques. Cette constatation peut être utile aux forestiers urbains pour mieux comprendre l'origine et la profondeur des valeurs que les gens ressentent vis-à-vis des arbres en milieu urbain, particulièrement envers les plus gros. Les résultats ont aussi des conséquences sur l'obtention de plus vastes et meilleures informations sur les programmes d'arbres remarquables; de même que sur l'utilisation de ces programmes comme véhicules pour développer un partenariat plus efficace entre les forestiers urbains et les citoyens par un meilleur partage bénéfique des découvertes et des connaissances.

Zusammenfassung. 1995 wurde in der Region von Chicago durch das Projekt für offene Landschaftsräume und das Morton Arboretum eine lokale Version des amerikanischen Großbaumprogramms ins Leben gerufen. Zusätzlich zu den numerischen Informationen über die Baumgröße, die über das Teilnahmeformular eingeholt wurden, fügten viele Teilnehmer Anmerkungen und manchmal ganze Briefe bei, die detailliert zahlreiche Aspekte der genannten Bäume beschrieben. In einer qualitativen Analyse dieser Informationen konnte eine Anzahl von immer wiederkehrenden Themen herausgearbeitet werden, die weit von den erforderlichen physikalischen Größenordnungen hinausgehen und ästhetische und funktionale Werte sowie symbolische und emotionale Bedeutungen beschreibt. Diese Informationen können den Forstleuten helfen, die ganze Tragweite der Werte, die Menschen insbesondere mit großen Bäumen verbinden, zu verstehen. Die Resultate implizieren ebenfalls, aus den Großbaumprogrammen mehr und bessere Informationen zu erhalten und diese Programme als ein Vehikel zu benutzen, um fruchtbare Zusammenarbeit zwischen Forstleuten und Einwohnern zu erreichen.