



# Tree Research and Education Endowment Fund

## TREE Fund Report

Fall 2007

### Special points of interest:

- Over \$190,000 awarded in grants in 2007
- TREE Fund assists students with travel expense reimbursement for TCI Expo
- Bandit to auction Chipper to benefit the TREE Fund
- \$9,000 awarded to Robert Felix Memorial Scholarship recipients

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## A John Z. Duling Grantee provides an update

### Root Hardiness of Trees and Shrubs Suitable for Container Planting in the Urban Landscape

By Nina Bassuk, Cornell University, Ithaca, NY

Your generous funding has helped us to address two major issues: the effect of container size, media type, and insulation on root-zone temperatures and the root hardiness of woody plant material. We have performed experiments both outside in containers and inside in a large ultra-low temperature freezer.

The results of these experiments far exceeded our expectations. With other variables held constant, the variation in the rate of chilling among four media types is statistically significant. Along with the exciting task of analyzing our already developed data, additional trials are being devised. We look forward to pursuing novel forms of insulation that could provide an even more temperature-modulated root zone for woody plants in containers.

Our root hardiness determination research is not as far along as our container experiments. Over the past year, an ultra-low temperature freezer has been modified for hardiness evaluations. This system has been designed to rapidly evaluate shoot and root samples for hardiness using differential thermal analysis (DTA). DTA relies on the heat-of-fusion (heat released as a solution changes from a liquid to a solid state) of the intracellular fluids. The temperature at which the exothermic reaction occurs provides an accurate

(continued on page 2)



## 16 Research Projects Funded, 3 Internationally

The TREE Fund reviewed 57 grant applications this year, requesting over \$890,000 in funding. We awarded \$197,941 to 16 projects. In addition, we initiated the management of the ISA Penn-Del Chapter grant: *Bacterial Leaf Scorch* at Rutgers University, by Dr. Anne Gould.

The TREE Fund continues to manage multi-year grants, in particular, the Hyland R. Johns grants which focus

on research priorities identified at the 2002 Research Summit. The John Z. Duling grants provide seed money for cutting edge research in arboriculture and urban forestry.

Look for the listing of the ten John Z. Duling Grant recipients on page 2 and the six Hyland R. Johns Grant recipients on page 3.

Summaries of research projects can be found on our website grants page at [www.treefund.org](http://www.treefund.org).

**Nina Bassuk Grant update**

estimate of hardiness. Developing this system has been very difficult and we have overcome a number of design obstacles that impeded our fully functioning system. Throughout the coming year, quantitative measurements of root hardiness of woody plant root samples of several species will be tested to identify hardiness acclimation and de-acclimation.

Mitigation of root-zone temperature stress through container and

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medium selection, paired with root hardiness ratings, will give us the ability to accurately predict above-ground tree survival. Significant steps toward improving our ability to grow woody plants in containers have already been made and we are committed to further investigations. We look forward to continuing our research and are grateful for your financial support of these projects.



**TREE Fund awards \$72,941 to John Z. Duling Grantees**

Congratulations to the 2007 recipients:

**Ash Root Collar Regeneration and Uptake of Merit Insecticide - \$7,500**

*Thomas Green, Fred Miller, and Gary Watson*

**The Influence of Synthetic Water Holding Polymers on Increasing Transplant Success of Trees - \$7,500**

*Glynn Percival, Univ. of Reading, U.K.*

**Effects of Mounded Mulch on Canker and Decay in Freeman Maples - \$7,500**

*Jeffery Gillman and Gary Johnson, Univ. of Minnesota*

**Assessing Field Level Cold Tolerance in Improved Genotypes of Taxodium distichum Tolerant of Alkaline Soils and Drought - \$7,441**

*Michael Arnold, Texas A&M*

**Impact of Imidacloprid on Disease Severity and Vector Recolonization in Oaks Susceptible to Bacterial Leaf Scorch - \$7,500**

*James Lashomb et. al., Rutgers University*

**Mycorrhizae and Drought Stress in New Urban Plantings - \$6,500**

*Grant Jones and Bal Rao, Davey Institute*

**The Comparative Cost-Benefit of Composted Greenwaste as a Mulch and Soil Amendment for the Improved Establishment Success of Municipal Tree Planting - \$7,000**

*David Marcus Bellett-Travers, Nottingham Trent University, U.K.*

**Improving Hazard Tree Diagnostic Tools for Arborists: How Well do Visual Observations of Fungal Fruiting Bodies Predict Extent of Wood Decay in Urban Trees? - \$7,000**

*Jason A. Smith, Univ. of Florida*

**Soil, Irrigation, and Production Factors Influencing Establishment of Container-Grown Trees at Various Planting Depths - \$7,500**

*Michael A. Arnold, Texas A&M*

**Is the Exotic Banded Elm Bark Beetle a Vector of the Dutch Elm Disease Pathogen? - \$7,500**

*W. R. Jacobi, Colorado State University*

**TREE Fund Research Committee**

**Robert Miller, PhD**  
Chairman

**Tom Prosser**

**Mark Timmons**

**Kay Sicheneder**

**Geoff Kempter**

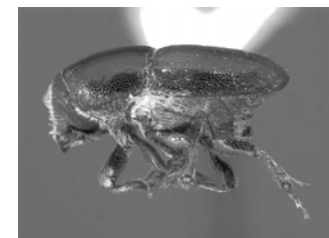
**Bruce Roberts**

**John Dwyer**

**Cathy Bentley**

**Jim Kielbaso**

**Ward Peterson**



**Hyland R. Johns 2007 Grant Recipients**

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A total of \$125,000 was awarded to the following six grantees. Congratulations!

**Towards improving soil biology and organic matter for urban tree health - \$17,500**

*Bryant Scharenbroch and Gary Watson, Morton Arboretum*

**Strategies and techniques to remediate compacted, poorly draining soils - \$20,000**

*Nina Bassuk, Cornell University*

**Novel disease control compounds to reduce pesticide usage in the arboricultural industry - \$25,000**

*Glynn Percival, University of Reading, UK and Bartlett Tree Research Laboratory*

**Effects of structural pruning on red maple trunk movement in wind - \$25,000**

*Ed Gilman and Forrest Masters, University of Florida and Jason Grabosky, Rutgers University*

**Effect of pruning on the stability of trees in windstorms - \$25,000**

*Ken James, Brunley College, Brian Kane, University of Massachusetts, and Nelda Matheney and James Clark, Hortscience*

**The early years: An analysis of street tree mortality and survival in New York City - \$13,000**

*Brian McGrath, Columbia University, Erika Svendsen and Lindsay Cambell, USDA Forest Service, and Jason Grabosky, Rutgers University*

**TREE Fund Responds to Student Needs** (list of scholarship recipients on page 4)

Students desiring to attend the TCI Expo Student Career Days will get some of their travel expenses reimbursed this year from the Robert Felix Fund of the TREE Fund.

In addition, TCI magazine will match two-to-one the \$3,000 contributed by the TREE Fund. We are pleased to offer this program which advances knowledge and helps prepare our future

workforce for a successful career in our industry.

Reimbursement is awarded on a first-come, first-served basis, depending on when the school registers with the TCIA for the EXPO. The TCIA will provide the TREE Fund with a list of authorized recipients of reimbursement funds after the EXPO. For more information contact the TCIA.



Greg Daniels, Peter Andreucci, Wayne Dubin, and Mike Robinson from Bartlett Tree Expert Co. teed up for the Robert Felix Memorial Golf Outing hosted by TCIA in Cancun this past February.

**Upcoming Special Events**

**Bandit Chipper Auction to benefit the TREE Fund! November 8-10th At the TCI EXPO!**

A silent auction for the chipper, valued at \$43,500, will be held at the Bandit booth on the Trade Show floor November 8 through 10, the with completion of bidding at the



Bandit Chipper Model 1590X

**Live auction Saturday—Nov. 10th at Noon.**

**Robert Felix Memorial Golf Tournament Tuesday, February 12, 2008 The Tierra del Sol Golf Course, Aruba 12:30-5:00pm**

Hosted by the Tree Care Industry Association to benefit the TREE Fund's *Robert Felix Memorial Scholarship* at TCIA Winter Management Conference in Aruba. The Tierra del Sol golf course is sure to challenge all levels of golfers. Your reservation of \$325 includes greens fees, golf cart, lunch, beverages, awards reception, and prizes.

**For sponsorship opportunities or to make your reservation, please visit TCIA's website at [www.tcia.org](http://www.tcia.org)!**

**Chapter Challenge Results for 2006**

The results are in for the 2005-2006 TREE Fund Chapter Challenge and the six chapters listed below rose to the Platinum Leaf level. In fact, Michigan busted through the roof and achieved double-Platinum status! The Gold Leaf chapters also did a great job. Florida, Indiana, Mid-Atlantic, Rocky Mountain and Texas reached that level -- some barely missing Platinum status! The dedicated TREE Fund supporters at the Illinois, New England, New York and Pacific Northwest Chapters achieved the Bronze Leaf level.

The grand total raised for the TREE Fund through this 18-month challenge was \$585,245! A huge TREE Fund vote of thanks goes to each and every person of

the participating chapters who graciously supported the TREE Fund programs.

As always, the TREE Fund will put those Challenge dollars to work to help fund research and scholarships. If there are specific projects you would like to see funded by the TREE Fund, please contact Executive Director Janet Bornancin (jbornancin@treefund.org) for information on how to set up a directed grant or to find out how we can assist you in administering projects you may already have underway.

For more information about special events that support the Chapter Challenge, please visit our website at [www.treefund.org](http://www.treefund.org).

**TREE Fund Liaisons**

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ASCA Liaison

**Platinum Leaf Chapters**

- Kentucky
- Michigan
- Minnesota
- New Jersey
- Penn-Del
- Wisconsin



**Gold Leaf Chapters**

- Florida
- Indiana
- Mid-Atlantic
- Rocky Mountain
- Texas

**Bronze Leaf Chapters**

- Illinois
- New England
- New York
- Pacific Northwest

**Robert Felix Memorial Scholarship Recipients**

Congratulations to the 2007 Robert Felix Memorial Scholarship winners! Each student receives a \$3,000 scholarship to continue their studies in the field of arboriculture and/or urban forestry.

**George Christie Murray  
Lexington, Indiana**

Education: Purdue University  
West Lafayette, Indiana  
Pursued Degree: Urban Forestry; Business Mgmt.  
Expected to Graduate: December 2008

**Kyle Andrejczyk  
Clinton, Massachusetts**

Education: University of Massachusetts  
Amherst, Massachusetts  
Pursued Degree: Urban Forestry & Journalism  
Expected to Graduate: May 2008

**Ramie Renee Pierce  
Tacoma, Washington**

Education: The Evergreen State College  
Olympia, Washington  
Pursued Degree: Urban Forestry  
Expected to Graduate: May 2008

**Message from the President**

**The mission of the TREE Fund is:**  
*To identify and fund projects and programs that advance knowledge in the field of arboriculture and urban forestry to benefit people, trees and the environment.*

I'm happy to report that six Hyland R. Johns Grants were approved in 2007. These multi-year grants address priority research and are for amounts up to \$25,000 each. Our John Z. Duling Grant program recently awarded over \$70,000 in research funds. And through a developing partnership with the Canadian TREE Fund, our Research Committee reviewed three requests for grants from the Canadian TREE Fund.

I am also pleased to note that the TREE Fund was honored by the University of Minnesota Foundation for its generous support of university research. On November 2, 2006, Dr. Jennifer Juzwik presented a President's Club Certificate to TREE Fund Trustee Tom Prosser. The President's Club recognizes donors

**by Allan J. West, President**

who contribute more than \$25,000 to the University of Minnesota.

Grants from the TREE Fund have primarily supported the research of Dr. Juzwik, a forest pathologist and project leader for the USDA Forest Service's North Central Research Station. Her work results in the creation of practical guidelines to prevent the introduction of invasive tree pathogens and associated insects, and to manage or mitigate diseases caused by established pathogens.

"The TREE Fund allows the University of Minnesota to do research that benefits the health of trees and the environment," Juzwik said.

Regarding education, three Robert Felix Memorial Scholarships were awarded in 2007. Please refer promising students to our website at [www.treefund.org](http://www.treefund.org) to apply for this \$3,000 scholarship. And this year, for the first time, we are assisting arboriculture students to attend the TCI Expo through funds provided by the TREE Fund and TCI Magazine.



California's Lt. Governor John Garamendi (left) presents a Commendation for the 2007 Tour des Trees to TREE Fund Board President Allan West on the Capitol steps in Sacramento.

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**From Gathering Grebes to Advancing Tree Knowledge**

**By Jim Barborinas,  
 PNW TREE Fund Liaison  
 & Board Trustee 1991-2007**

My connection to trees and eventually the TREE Fund began as a youngster hunting, fishing and searching for mushrooms with my dad. Gathering bushels of *Grebes* (mushroom in Lithuanian) and canning them every fall was the highlight of both the outdoor fall experience and indoor feast throughout the year. Only later did I realize that the Honey mushroom we collected was the edible fruiting body of the very destructive and pervasive *Armillaria mellea*, a tree disease I now look for, for a different reason. In a leap through time, I went on to Southern Illinois University to study forestry in 1969. Still picking Honey mushrooms on campus, colleagues and hippies looked on in horror, figuring I was either poisoning myself or had found a new way to get high.

Throughout grad school and after, I worked for a private foundation in

the Midwest running a tree spade, started tree nurseries for small communities and planted a large native plant collection at a unique Illinois wild animal and plant park. Then it was on to the Peoria Park District until I snagged a position with a forest management company in the Pacific Northwest in 1987.

In 1990, my wife Annie and I started our own consulting company, Urban Forestry Services, Inc. Over time, we began a second business of growing street and landscape trees, called Urban Forest Nursery, Inc. During all of these ventures, both professional and personal, I have had lots of questions about trees, but found that proven answers were difficult to uncover. That is where my connection to the TREE Fund solidified. I want real information separated from the hype and research is one of the best ways to get it. From that knowledge, we can better manage our trees where we live, work and play.



### The TREE Fund Mission

To identify and fund projects and programs that advance knowledge in the field of arboriculture and urban forestry to benefit people, trees and the environment.

#### TREE Fund Partners

Asplundh Tree Expert Co.  
Pacific Gas & Electric Co.  
STIHL Inc.

Tree Research and Education  
Endowment Fund  
711 E. Roosevelt Rd.  
Wheaton, IL 60187

(630)221-8127  
treefund@treefund.org

Please contact our office if you are receiving duplicate copies of this newsletter or if there are any corrections to your address information.  
Thank you!

[www.treefund.org](http://www.treefund.org)

*If you want to save a tree  
and go "e" ...  
please send your request to  
treefund@treefund.org*

## Advancing Knowledge in Arboriculture and Urban Forestry

### Important Dates

<b>October 15</b>	Annual Appeal Campaign Begins
<b>November 1</b>	Deadline for Duling Grant Applications
<b>November 8-10</b>	Bandit Chipper Auction at TCI Expo
<b>November 15</b>	Get another tax deduction by sending your annual gift to the TREE Fund!
<b>January 2008</b>	Special Events Annual Sponsorship Campaign  "Raise Your Hand for Research" Auction Item Procurement Begins
<b>February 2008</b>	Endowment Campaign Kick-Off
<b>February 12</b>	Robert Felix Memorial Golf Tournament

*The cultivation of trees is the cultivation of the good,  
the beautiful and the ennobling in man.* - J. Sterling Morton

TO: