



## Crowning Achievements

### Research Results on Root Severance and Tree Health

When soil near a tree in the urban environment is excavated for construction or infrastructure placement, tree roots are often damaged, leading to tree decline, reduced stability, and sometimes, tree mortality. This topic has been studied in a variety of ways, but in [“Effects of Root Severance by Excavation on Growth, Physiology and Uprooting Resistance of Two Urban Tree Species,”](#) Dr. Alessio Fini (University of Florence, Italy) wanted to specifically look at the effect of two different levels of root severing on tree growth, physiology and stability; assess the response to root damage by two species presumed to differ in tolerance to root manipulation (*Tilia x europaea* and *Aesculus hippocastanum*); and determine if root severance on one side of the tree affects leaf gas exchange over the whole canopy, or if the effect is restricted to branches attached at the severed side of the tree.

Dr. Fini’s findings provide further evidence that root protection during construction and trenching activities is critical. In his experiment, a single trench could remove 45-47% of the root system, and multiple trenches could remove as much as 75%. Interestingly, the two tree species responded similarly to the root damage, and growth reductions and altered hydraulic architecture were more severe on trees whose root system had been severed on the two opposite sides. While visible symptoms such as dieback or tree mortality may occur several years after root damage, Dr. Fini saw clear changes in tree physiology a few months after root loss, and those remained significant after 26 months.

Read more about this project and discover additional TREE Fund roots and soil studies on the [Research Archive](#) page of the TREE Fund website.

*“Nature welcomes inquiry. Nature does not hide its work. Just seek, and you will find.”*

- Alex L. Shigo

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## Leading Thoughts

By J. Eric Smith, TREE Fund President and CEO

As I write my final “Leading Thoughts” column for 2018, we are deep into TREE Fund’s annual [year-end operating appeal](#). I’ve worked in the nonprofit sector for a long time, so I’ve come to associate these appeals with the season: there’s turkey, there’s shopping, there’s revelry, there’s resolutions, and in the midst of all that, there’s a last push to raise funds, to give donors both “feel-good” experiences and year-end tax benefits.

I wrote back in [September](#) about how changes in Federal law may impact the tax benefit of those gifts, but also how important it is that we all still “keep charity charitable,” empowering and celebrating the good work that nonprofits do in so many ways, in so many places, for so many people. That charitable intent is particularly important when it comes to the unrestricted operating funds that many year-end appeals support. They may not have pizzazz of brick and mortar giving, nor the permanence of endowments, but they are crucial to what we do.

For some folks outside of the nonprofit world, that phrase – “unrestricted operating funds” – may have unintended negative connotations: “Wait, you can do anything you want with it? Are you going to just spend it on overhead? Is that okay? Maybe I’d better give to this restricted endowment pool instead.” But all it really means is that we have the flexibility to support our “areas of greatest need” internally, and for TREE Fund, that need largely equates to *people!*

When you remove grants we pay from our operating budget, about three-quarters of the remaining expenses pay for the folks who actually do the work to fulfill our mission – and do it well, if it’s not inappropriate for me to say so. That’s Barb managing the grants, Karen communicating our research findings, Monika educating our donors, Maggie managing community engagement, including the Tour des Trees that Paul directs, Dipika keeping the books, and Russ ensuring our computer systems support it all. Plus me, often on the road, doing my best to champion tree science and the professionals who benefit from it.

Some of those folks you may know, some not. Some are employees, some are contractors, some part-time, some full. All are passionate about our mission, work hard to pursue it, and are largely supported by unrestricted operating funds, secured via appeals, partnership or events. So anytime you email, call, engage on social media, read a newsletter article, share a research finding, or see a TREE Fund team member in person giving you great service in pursuit of our shared goal, then *that’s* what “unrestricted operating funds” are all about: it’s the people who make the mission.

I hope you’ll support our team, just as I do with my own family’s gifts to TREE Fund. They earn your trust; they are good stewards of your gifts. I’m proud to work with them all.

## 2019 Spring Cycle Applications Open in January

Applications for the following TREE Fund grant and scholarship programs will be open January 15 through March 15, 2019:

- \$25,000 Hyland R. Johns Grant
- \$50,000 Utility Arborist Research Fund Grant
- \$5,000 Ohio Chapter ISA Education Grant
- All scholarships (\$3,000 to \$5,000)

Please note that a Letter of Inquiry is now part of the research grant application process, so we recommend applying early. Get more [details and instructions](#) on the TREE Fund website.



## Lead Donors

We are grateful to the following people and organizations who contributed \$2,500+ to TREE Fund in November 2018. See the full list of 2018 Lead Donors who make our work possible on the [donor page](#) of our website. Thank you!

- Arborjet, Inc.
- Ford Motor Company
- Green Manufacturing, Inc.
- International Society of Arboriculture
- Mid-Atlantic Chapter ISA
- Utility Arborist Association

## YOU Can Help Urban Trees Thrive

We need trees, and trees need our help. Urban trees require special care – provided by professional arborists, drawing on the kind of scientific research empowered by TREE Fund. Please help our urban canopy thrive with a [donation](#) to TREE Fund today. Thank you!



## TREE Fund Transitions

TREE Fund would like to express its heartfelt gratitude and thanks to **Jim Barborinas** (Urban Forestry Services, Inc.), for his many years of committed service to our organization. Even before TREE Fund was established in 2002, Jim was an active volunteer and advocate for tree research and education at one of our predecessor organizations, the ISA Research Trust. In 1992 Jim rode the first Tour des Trees, and he holds the distinction as the first Liaison Committee Chair. Jim has served eleven years as a TREE Fund Trustee (2003-2007 and 2013-2018), providing a nurseryman perspective to our work. He is a member of the Research and Education Committee, and chairs the Ken Ottman Volunteer Award Committee (an honor which he himself has received). Jim and his wife, Annie, are leaving a lasting legacy to the tree community as well, establishing the Barborinas Family Fund which will begin issuing grants in 2019. Jim will step down as a TREE Fund Trustee at the end of 2018. We will miss him, and we wish him and Annie the best in all future endeavors.



TREE Fund welcomes **Jacques Brunswick** (Jacques Brunswick & Associates, LLC) to our Board of Trustees. Over the past few years, Jacques has served as a member of our Audit and Finance Committee and Development Committee, bringing his extensive background in public charities and nonprofit accounting to our organization. He and his wife, Louise Desjardins, are veteran Tour des Trees riders as well. We appreciate Jacques' many contributions and look forward to working with him in this new role.



## Volunteer Spotlight

Please join us in celebrating the researchers who have presented a TREE Fund webinar in 2018. You may not realize that **Drs. Mike Arnold, Nina Bassuk, Whitney Cranshaw, Christopher Halle, Dan Herms, and Brian Kane** have *volunteered* their time to create and broadcast top-notch programs that have educated thousands in the tree care community. We are extremely grateful for their inquisitive minds, passion for trees, and willingness to share their expertise. Thank you, all!



Top: Arnold, Bassuk, Cranshaw  
Bottom: Halle, Herms, Kane

## The Word on Webinars

Did you know? Past TREE Fund webinars can be accessed via the [webinar page](#) of our website. Dr. Dan Herms' *Emerald Ash Borer: Strategies for Conserving Ash in the Urban Forest* has been posted, and Dr. Nina Bassuk's *Reducing Tree (and Soil!) Damage during Construction* will be available in late December.

Mark your calendar for **February 5, 2019**, at 12:00 p.m. (Mountain) for ***The Salt Dilemma: Growing Better Urban Trees in Northern Climates***. James Urban, FASLA (Urban Tree + Soil), Andrew Millward, PhD (Ryerson University), and Adam Nicklin (PUBLIC WORK) will discuss recent research on tree performance in structural soil cells, options to reduce salt damage to trees, and the role landscape architects can play in helping the urban canopy thrive. Registration will open in early January on our [webinar page](#).



Urban

Millward

Nicklin

TREE Fund is a 501(c)3 nonprofit whose mission is to support scientific discovery and dissemination of new knowledge in the fields of arboriculture and urban forestry.

### TREE Fund

552 S. Washington St., Ste. 109  
Naperville, IL 60540

### Contact Us

#### TREE Fund

552 S. Washington Street  
Suite 109

Naperville, IL 60540

(630) 369-8300

[treefund@treefund.org](mailto:treefund@treefund.org)

Visit us online at  
[treefund.org](http://treefund.org).



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