



TREE Fund Research Published or Presented in 2020

TREE Fund grantees are noted in bold

Arnold, M.A., A.R. King, S.T. Carver, and D.L. Cartmill. 2021. Propagation method impacts survival and growth of below grade planted trees. *Advances in Agriculture, Horticulture and Entomology*. (in press)

Bassuk, N.L.,

Academic publication:

Miller, B.M. and N.L. Bassuk. 2020. p. 219-228. Enhancing Tree Transplant Success Through the Manipulation of Root Hydraulic Conductance. The Landscape Below Ground IV. International Society of Arboriculture. Champaign, IL.

Academic presentation:

2018-10-16 Enhancing Tree Transplant Success Through the Manipulation of Root Hydraulic Conductance. Landscape Below Ground IV. Lisle, IL. [Poster]

Notes:

A presentation was planned for the Woody Root 8 international conference in the summer of 2020 (see next page), however, the conference was cancelled due to COVID-19. The researchers intend to pursue a presentation when this conference is rescheduled in 2022 and will also include data in a TREE Fund webinar planned for June of 2021. A manuscript outlining this research is in preparation (“*Root Shaving Influences Root Hydraulic Conductance of Two Species of Quercus Grown in Containers*”) and is intended to be submitted for publication by September, 2021. See abstract below.

Berland, Adam

Publication:

Berland A, Roman LA. 2020. New possibilities for virtual street tree inventories. *Arborist News* 29: 22-26. <https://www.fs.usda.gov/treearch/pubs/59661>.

Presentations:

Berland A. 2021. Pros and cons of virtual street tree inventories. Iowa State University Virtual Shade Tree Short Course.

Berland A. 2021. A simple technique for online street tree inventories. Indiana Arborist Association Annual Conference.

Berland A. 2020. A simple technique for online street tree inventories – it is right for my community? TREE Fund Webinar Series

Dahle, GA

Publications

Beezley, KE, **GA Dahle**, J Miesbauer, D DeVallance. 2020. Determination of Strain Patterns Across the Root-Stem Transition Zone in Urban Trees. *Arboriculture & Urban Forestry* 46:321–332. John Z Duling Grant, TREE Fund, 2015

Reports



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Sparkman, JM, T, M Walker. 2020. Development of a regional research approach to modeling tree failure risk probability affecting distribution overhead lines. Final Report to the TREE Fund Utility Arboriculture Research Fund grant UARF #19-UAA-01.

Presentations

Tree caused outages and relationship to stream and soil type. TREE Fund After Hours. December 2020 UARF TREE Fund, 2020

Can we estimate the probability of failure along distribution corridors? September 2020. Trees & Utilities Virtual Conference. UARF #19-UAA-01.

Tree Biomechanics: Tree, Wind & Gravity. California Tree Failure Report Program Annual Meeting. January 2020. Woodside CA. John Z Duling Grant, TREE Fund, 2015

Fini, A., Frangi, P., Mori, J., Sani, L., Vigevari, I., Ferrini, F., 2020. Evaluating the effects of trenching on growth, physiology and uprooting resistance of two urban tree species over 51-months. Urban Forestry and Urban Greening, 126734. The publication deals with the results of the Jack Kimmel Award “Effects of root severance by excavation on growth, physiology and uprooting resistance of two urban tree species”

Presentations

14 Feb 2020: Conference “Le dimore degli alberi”, held in person at Milan Cultural Centrum, Milan, Italy: invited speaker with the oral talk: “Alberi e pavimentazioni” (“Trees and pavements”). The presentation deals with the results of the Research Fellowship Award “Long-term assessment of the effects of impervious, permeable, and porous pavements on the underlying soil and on established trees”

Dec 2020: 96th ISA Annual Conference, held online: speaker for the oral presentation: “Does soil sealing affect health of urban trees? An eight-year research”. The presentation deals with the results of the Research Fellowship Award “Long-term assessment of the effects of impervious, permeable, and porous pavements on the underlying soil and on established trees”.

Msc Thesis:

1- **Andrea Ansaghi** - Effetti di differenti tipologie di pavimentazioni sul suolo e sulla crescita e fisiologia di *Celtis australis* e *Fraxinus ornus* (Effects of different pavements on soil and on growth and physiology of *Celtis australis* e *Fraxinus ornus*). Discussed at University of Milan. The thesis activity deals with the results of the Research Fellowship Award “Long-term assessment of the effects of impervious, permeable, and porous pavements on the underlying soil and on established trees”.

2- **Paolo Bosio** - Valutazione di tecniche non invasive per il rilevamento degli apparati radicali in ambienti pavimentati e non pavimentati (Evaluation of non invasive techniques for locating the root system of trees in paved and unpaved soils). Discussed at University of Milan. The thesis activity deals with the results of the Research Fellowship Award “Long-term assessment of the effects of impervious, permeable, and porous pavements on the underlying soil and on established trees”.

Bsc Thesis

1- **Linda Garavello** – Metodi non invasivi per lo studio degli apparati radicali di specie arboree in ambiente urbano (Non invasive methods for studying the root system of tree species in urban sites). Discussed at University of Milan. The thesis activity deals with the results of the Research Fellowship Award “Long-term assessment of the effects of impervious, permeable, and porous pavements on the underlying soil and on established trees”.



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Gordon, Jason, Schelhas, J, Mattox, T, Walters, R, Campbell H (Oct. 30). “Engaging underserved populations in community tree management activities.” Invited oral presentation for the Panel discussion “Not There Yet: Addressing Forestry Challenges for African American Landowners and Communities in the South.” At the Society of American Foresters annual convention, Oct 30-Nov 3, 2020. Virtual Conference.

Gordon, J (Oct 30) Understanding urban tree values and attitudes of an historic African American neighborhood. Accepted presentation at the Society of American Foresters annual convention, Oct 30-Nov 3, 2020. Virtual Conference.

Gordon, J (Nov 18) Contextualizing tree risk perceptions in an historical African American neighborhood submitted to Partners in Community Forestry, Nov 18-19, 2020. Virtual Conference.

Gordon, J, Schelhas, J, Mattox, T, Walters, R, Campbell, H. (Nov 5) Contextualizing tree risk perceptions in an Historic African American Neighborhood. Invited oral presentation for the Panel discussion Mitigation of urban tree hazards and community perceptions at the annual meeting of the Georgia Tree Council, Nov. 5-6, 2020. Virtual Conference.

Gordon, J, Campbell, H, Schelhas, J, Mattox, T, Walters, R (Dec 9) Engaging underserved populations in community tree management activities. Presentation at the TREE Fund program during the International Society of Arboriculture annual convention and trade show, Dec 7-11, 2020. Virtual Conference.

Hauer, Richard J., Hanou, Ian S., Sivyer, David 2020. “Planning for active management of future invasive pests affecting urban forests: the ecological and economic effects of varying Dutch elm disease management practices for street trees in Milwaukee, WI USA”
Urban Ecosystems (2020) 23:1005–1022
<https://doi.org/10.1007/s11252-020-00976-6>

Papers

Hauer, R.J., I.S. Hanou, D. Sivyer. 2020. Planning for Active Management of Future Invasive Pests Affecting Urban Forests: The Ecological and Economic Effects of Varying Dutch Elm Disease Management Practices for Street Trees in Milwaukee, WI USA. Urban Ecosystems. 23:1005 – 1022.
<https://doi.org/10.1007/s11252-020-00976-6>

Ma, B., R.J. Hauer, H. Wei, A.K. Koeser, W. Peterson, K. Simons, N. Timilsina, L.P. Werner, C. Xu. 2020. An Assessment of Street Tree Diversity: Findings and Implications in the United States. Urban Forestry & Urban Greening. 56 (December). <https://doi.org/10.1016/j.ufug.2020.126826>

Hauer, R., A. Koeser, S. Parbs, J. Kringer, R. Krouse, K. Ottman, R. Miller, D. Sivyer, N. Timilsina, L. Werner. 2020. Effects of a Tree Preservation Program on Tree Survival, Condition, and Growth in Milwaukee, WI, USA. Landscape & Urban Planning. Volume 193, January 2020, 103670

Hilbert, D.R., E. North, R. Hauer, A. Koeser, D. Mclean, R. Northrop, M. Andreu, S. Parbs. 2020. Predicting Trunk Flare Diameter to Prevent Tree Damage to Infrastructure. Urban Forestry & Urban Greening, Volume 49, March 2020, 126645, <https://doi.org/10.1016/j.ufug.2020.126645>



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Hauer, R., A. Koeser, S. Parbs, J. Kringer, R. Krouse, and D. Sivyer. 2020. Street Trees, Construction, and Longevity: Tree Growth and Response Over Four Decades (1979–2018). In G. Watson, E. Gilman, J. Miesbauer, J. Morgenroth, B. Scharenbroch. The Landscape Below the Ground IV, Proceedings of the Fourth International Workshop on Tree Root Development in Urban Soils, October 16–17, 2018. International Society of Arboriculture. pp. 544–561

Talks

Hauer, R.J. 2020. Emerald Ash Borer Management, What Can You Do? Montana Urban and Community Forestry Association. Oral Presentation. Virtual, Montana. December 4th, 2020

Hauer R. 2020. Urban Forest Response and Strategies to Emerald Ash Borer: What have we learned over the past 12 years. 2020 WAA/DNR Annual Conference. Wisconsin Arborist Association. Oral Presentation. Green Bay, WI. February 16–18, 2020

Hauer, R. 2020. Building Street Tree Resiliency to a Construction Crisis: A 40-year Case Study of Knowledge. Western Tree Management Symposium – Trees and Infrastructure. Qingdao Agriculture University. Oral Presentation. Virtual. Qingdao, China. December 8, 2020

Hauer, R. 2020. Building Street Tree Resiliency to a Construction Crisis: A 40-year Case Study of Knowledge. Western Tree Management Symposium – Trees and Infrastructure. Oral Presentation. San Marino, CA. February 13, 2020

Hauer, R. 2020. Building Street Tree Resiliency to a Construction Crisis: A 40-year Case Study of Knowledge. The 55th Annual Shade Tree Symposium, Penn-Del ISA Chapter. Lancaster, PA. Oral Presentation. February 10–11, 2020

Hauer, R.J. 2020. Building Street Tree Resiliency to a Construction Crisis: A 40-year Case Study of Knowledge. 2020 Utah Green Industry Conference. Oral Presentation. Sandy, UT. January 27–29, 2020.

Hirons, Andrew Using botanic gardens and arboreta to help identify urban trees for the future
Andrew D. Hirons, J. Harry R. Watkins, Tim J. Baxter, Jason W. Miesbauer,
Andrew Male-Muñoz, Kevin W. E. Martin, Nina L. Bassuk, Henrik Sjöman, Plants People Planet DOI:
10.1002/ppp3.10162, September 2020
www.wileyonlinelibrary.com/journal/ppp3

Kane, Brian

Rigging Forces. Massachusetts Arborists Association. October 2020.
Forces at an Anchor During Climbing and Rigging. Connecticut Tree Protection Association. August 2020.
Decay and the Likelihood of Tree Failure. Davey Tree Experts Technical Services meeting. July 2020.
Likelihood of Failure of an Anchor Point. Davey Tree Experts International Safety Trainers. May 2020.

Laver, Alexander I presented a update for the ISA international virtual conference, The UK Arboricultural Association conference, which is still available through their You Tube on line learning page.

An article was also published by the TCIA co authored by Phill Kelly.



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Wolf, Kathleen L., Sharon T. Lam, Jennifer K. McKeen, Gregory R.A. Richardson, Matilda van den Bosch and Adrina C. Bardekjian 2020. "Urban Trees and Human Health: A Scoping Review." International Journal of Environmental Research and Public Health
<http://dx.doi.org/10.3390/ijerph17124371>