



Seeing Urban Forest Through the Trees

Dave Nowak — R.W. Harris Author's Citation
Project Leader, Research Forester: USDA Forest Service, Syracuse, New York

Dave Nowak has an incredible task on his to-do list. As a project leader with the USDA

Forest Service, Northern Research Station in Syracuse, New York, he's investigating the health and benefits of the urban forest structure on both the local and national levels.

Nowak has been with the Forest Service for more than 20 years and is up to the challenge. He's written more than two-hundred research articles on the impact of the urban forest.

"Quantifying and exploring the urban forest is quite fascinating, as we know relatively little about this significant resource that we live amongst," says Dave. "Nationally, there are billions of urban trees that comprise a multi-trillion dollar

resource, which provides important services related to human health and well-being."

Nowak says this kind of information on the health and benefits is different depending on where the study takes place, but uncovering the facts requires tracking good local data on the urban forest. That is why his research team and numerous cooperators have developed free online software called i-Tree. The information provided by i-Tree has been used to influence management and policies throughout the United States and the world in relation to urban forestry.

Nowak is a former principal scientist with the Chicago Urban Forest Climate Project. He's received numerous awards, including the American Forests Urban Forest Medal, which recognized him for outstanding contributions on a national level for research. In 2007, when the Nobel Peace Prize was given to the Intergovernmental Panel on Climate Change (IPCC) and former Vice President Al Gore, Jr., Dave also received honors. He was among the 13 Forest Service researchers who contributed to the IPCC document.

Many years of study are ahead of Dave Nowak as this highly regarded scientist continues to focus on urban forest effects and changes through time.

Schnobrich is credited with turning Hutchinson into what some now call a "forest oasis on the prairie." He implemented a tree planting program that brought in 400 new trees to the city each year he was employed. When he was brought on as city forester, his initial focus was to manage the city's problem with Dutch Elm Disease. It was his idea to mill timber from those diseased trees and recycle the wood for park shelters and trailer beds.

Schnobrich is also responsible for initiating The Energy Tree Planting Project funded by the local utility commission. Since the 1990s, some 8,000 trees have been planted on private property throughout Hutchinson to offer much needed shade in summer and protection from the cold winds of winter.

He even helped restore tree history on donated park land in Hutchinson. Volunteers cleared the land, and a state grant paid for the renewal of the park. Now, 20 years later, a fully restored oak savannah is in the middle of town.



2011 Awards of Distinction Recipients

ISA's Awards of Distinction recognize honorees in such categories as research, publishing, education, and advancing the cause of the organization. The winners are selected by a diverse group of experts in arboriculture. Visit isa-arbor.com for extended biographies on each of the winners.



Passionate about Trees

Mark Hartley — Award of Merit
Tree Transplantation Consultant, Instructor: The Arborist Network Penrith, New South Wales, Australia

With a career in arboriculture that began some 30 years ago, Australia native Mark Hartley has been on a mission to improve safety, working conditions, and technique for arborists and tree care professionals.

This year, Mark was chosen to receive the 2011 Award of Merit from ISA. It is the highest honor ISA bestows to members of the organization, and is awarded in recognition of outstanding service in advancing the principles, ideas, and practices of arboriculture.

"I am passionate about trees and education," Mark says. "ISA

has a strong focus on scientifically grounded arboriculture. This is seen in information and research applied in the field."

In the late '70s, the predominant crisis in Australia was the topping of trees, a practice where the majority of branches are cut from a tree and all foliage removed. Mark became one of the founding members of the Tree Surgeon's Guild, where arborists could set themselves apart from industry practices that were considered questionable. Mark even took his cause to local government, asking officials in Sydney to stop damaging trees in this way. He and a colleague developed what eventually became the Australia Standard for Amenity Tree Pruning.

Mark's drive to advance safety standards in his country took on a personal nature when he hurt himself on the job. He nursed his injury and devoted his time to bring better training to his country. The result led Don Blair and other American arborists to Australia, where they pushed for higher standards and education to guide arborists with their technique and tools.



A Steward of the Trees

Mark Schnobrich — Honorary Membership
Retired Municipal Forester Hutchinson, Minnesota

When Mark Schnobrich first became a city forester in Hutchinson, Minnesota more

than 30 years ago, few communities were even aware of the benefits gained from urban forestry.

"I think trees are fun, and I think most people, when they have a moment to look around, realize the same thing. If they could just think of them as a way to express themselves in their yards and even when they head into the woods, they would become even more attached to them."

A Degree in Botany and Religion

Lauren Lanphear — Award of Achievement
ISA Certified Arborist: Forest City Tree Protection Co., South Euclid, Ohio



Listen to Lauren Lanphear talk about his connection to ISA

and you realize his roots run deep in the organization and his profession. Lauren grew up in a family tree business that his grandfather founded in 1910. He now lives in his grandfather's house – also Lauren's boyhood home – and on the same property as his business, Forest City Tree Protection Co. An ISA certified arborist, Lanphear says caring for our tree population is really quite simple.

"Protect and preserve the ones that you have because they are a plus for the environment. New trees take several years before they give back."

As a former ISA President, Lanphear set his sights on the safety committee trying to expand its international outreach. That was accomplished with the first addition of a chair member in China. Safety is one of the biggest concerns in the arboriculture industry. Lanphear says helping the ISA safety committee cast a wider net and allowed them to bring in experiences and safety standards from around the world to make the organization even stronger.

His experience as an international leader shows a firm understanding of ISA's membership. He has been a director since 1994, was a vice-president on the Executive Committee in 2001, and is a past recipient of the Honorary Life Member Award. He says his studies in botany and religion allow him to take care of that which, 'only God can make.'

Lanphear learned the importance of being involved in the industry early on from his family. He recalls being 4 years old and watching his father leave home to attend National Shade Tree Organization meetings, (later ISA).

His career didn't take him far from his own backyard.



The International Society of Arboriculture's 2011 Awards of Distinction are presented by Bartlett Tree Experts.





ISA Is His Past, Present and Future

Robert Miller — *Honorary Life Membership*
Professor (retired), Researcher,
Author: University of
Wisconsin–Stevens Point,
Oriental, N.C.

Dr. Robert Miller's list of professional activities is a long one. Sprinkled in among the endeavors are his role as an ISA Director, chair of the publications committee, the editor of ISA's research journal, *Arboriculture and Urban Forestry*, and a past winner of the Excellence in Arboriculture Education award. Now, Dr. Miller is awarded this year's ISA Honorary Life Membership.

"I was very surprised and feel honored. I took students to ISA meetings," Miller recalls. "Seeing how they were welcomed by professionals always made me confident that ISA was an

organization looking to the future."

Miller retired from teaching in the College of Natural Resources at the University of Wisconsin–Stevens Point in 2002. There are several teaching awards to his credit over the years, but his students remember him most for his caring approach and deep knowledge of the industry.

"I think my greatest achievement was to prepare students for careers in arboriculture and urban forestry and getting to know so many of them on a personal basis. I can assure you that I have learned more from them over the years than the other way around."

Miller began his career as a forester and brought a good deal of his background into his teaching practice. He has authored several books on tree history, tree inventory, and forestry and is still involved in consulting and writing. And while much of his retirement is spent sailing, fishing, or boat-building, he still remains committed to urban forestry. Miller is chair of the tree board in Oriental, North Carolina, planting and caring for the town trees.



Retired from Teaching, but Not from Trees

Dr. Thomas Green — *Alex L. Shigo Award (Excellence in Arboriculture Education)*
Professor of Arboriculture
(retired) and Consultant:
Commercial Chestnut Producer
Macomb, Illinois

When Professor Thomas Green was finishing up his Ph.D. in Forest Pathology at Iowa State University, the first step in his career led him outside the classroom. First, he became a city forester, then a research plant pathologist, which he says really connected him to arboriculture as a career. When a position opened up at Green's alma mater, Western Illinois University (WIU) in Macomb, Illinois in 1993, he accepted it and brought that real world experience into the classroom. Students learn the ropes from him — literally.

"I focused course content to make graduates more competitive in the job market," recalls Green. "There is one class I created called 'Basic Tree Worker Skills.' The class lab involves

climbing, rigging, and safely using chainsaws. There is a second class, 'Arboricultural Supervisor Practicum,' for those who have already taken that course. They come to the lab to climb with new students and supervise them while 'learning the ropes.'"

Green believes this second class adds an important element to teaching students how to safely climb trees. Part of the lecture even involves learning how to run a business and deal with clients. Green is not aware of any other class like it in a college program.

Now retired, Green hopes more arborists will focus on outreach in schools at the primary level. He believes Botany and the science of tree care should be taught in grade school and high school because the earlier students are exposed to the value of trees, the more the trees will be protected and cared for.

Green now spends his time writing letters of recommendation for his graduates. He consults on disease and insect problems. He's even a commercial producer of Chinese chestnuts. There are requests for judging forestry competitions at high schools, and it's not unusual to find him at an elementary school showing teachers how to plant a tree and prune it with care.



A Study of Which Way the Wind Blows

Ken James — *L.C. Chadwick Award (Arboriculture Research)*
Engineer and Research
Specialist: ENSPEC Consulting,
Victoria, Australia

Dr. Ken James is considered an international leader in tree biomechanics research. But just like a tree is nothing without its branches, James says he would not have made such strides in his study of tree dynamics and wind loading had it not been for support from ISA and the friendship of the arborist community.

"My research has focused on tree dynamics and how wind affects trees," Dr. James says. "Dynamics is giving us a better understanding of how trees survive winds and, in particular, how branches are important in damping the wind energy to minimize tree sway."

Dr. James reveals that a tree's branches sway individually and

not as one canopy. This effect is known as "mass damping," which is not yet fully understood in trees. Dr. James spent 18 years as a research engineer and lecturer at Melbourne University in Victoria, Australia, where he earned an international reputation for his study on wind and trees. He has engineered and tested digital instruments to measure the trees dynamic response to winds.

Dr. James says there are computer models that predict wind damage in plantations and forests as a group but not for individual trees in urban areas. So what is the difference between the forest and the trees? Branches. He concludes that urban trees have more branches than those in a forest, so branch dynamics are more important in populated areas.

"This idea means that it is the form and shape of the tree, rather than the species, that influences the dynamics and how it copes with the wind. Following this logic, it may be that practices of growing and pruning trees in cities will be influenced by this dynamics research."

So while the emphasis on "trees are good" is significant, Dr. James believes this courtesy should also be extended to the branches.



Arborists Influence His Vision

Brian Kane — *Early Career Scientist Award*
Massachusetts Arborist
Association Associate
Professor, Researcher:
University of Mass–Amherst,
Amherst, Massachusetts

Dr. Brian Kane is an ISA Certified Arborist and tree climbing specialist, but it is the work he has accomplished in recent years as a researcher that is earning him recognition. Dr. Kane, who is currently the Massachusetts Arborist Association Associate Professor of Commercial Arboriculture in the Department of Environmental Conservation at the University of Massachusetts–Amherst, is well-respected for his studies on tree biomechanics and risk assessment.

Dr. Kane has looked extensively at how pruning trees impacts the response from wind load and has taken a close look at the result of rigging operations on tree worker safety. He says these last two studies are changing arboriculture right now.

"I think arborists are more aware of the importance of the location of decay as well as its extent in a tree. I also think arborists have benefited from a better sense of how much stress they put on a tree when rigging it and how much stress that tree can handle before it fails. Arborists also hopefully understand any new piece of gear or climbing technique can have serious limitations if not used properly."

Dr. Kane has published 30 scientific journal articles and is the recipient of numerous research grants. His accomplishments come with less than 12 years as a post-graduate scientist, a short time for compiling so much analysis, especially when experiment completion cycles.

An ISA member since 1994, Dr. Kane recognizes that safety cannot be improved overnight, but he certainly appears to be on a fast-track toward implementing better practices through science.