



Autumn 2020

the Forest Steward

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*Charting new
paths
for the future of
forest stewardship.*

*An autumn trail at Notchview Reservation.
Photo courtesy of the Trustees of Reservations*

**Forest Stewards
Guild**
putting the forest first

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Forest stream in the Pecos Wilderness, New Mexico.

Written by Zander Evans

Thinking about the next 25 years can be daunting because of the challenges we and our forests face. I take strength from the last quarter century. Looking back to see all that we, as a wide network of committed professionals and supporters, have accomplished gives me hope for what we can achieve in this new era. As Jan-Willem highlights in his article, the Guild is a network that builds and grows. Over the next 25 years, we need to extend our network to better include people and communities that for too long have been marginalized in forestry and conservation. Diversifying our Guild will make it stronger, more creative, more powerful, and better able to surmount our obstacles.

Similarly, we will need to support and collaborate with our partners to succeed. Jameson French highlights the essential roles landowners, land trusts, forest products companies, and forest workers have to play – and the importance of the Guild to connect and reinforce them. Adaptation to an altered climate will likely be a key place for the Guild to lead and support our partners. Maria

Janowiak's article calls out Guild members' creative thinking and openness to new solutions. Over the last 25 years, these traits have made us leaders in emerging solutions from forest certification to fire adapted communities to carbon forestry. We will need to exploit these traits in the next 25 years to implement the no-regrets adaptation Maria describes.

Active, two-way dialogue between research and management will be central to effective response to the complex interactions of forests, humans, and our environment in the 21st Century. The Guild and partners have already started this science and management partnership with open minds and creativity. I believe marshalling our innovation and on-the-ground determination to put the forest first will continue to attract and inspire the next generation of forest stewards and leaders that Justin Hart identifies in his article. Indeed, we have 77 new student members so far this calendar year. The Guild, and all it represents, is crucial not just for healthy forests but for our communities to flourish across the country.

Zander

■ Growing the humus of excellent forestry

Written by Jan-Willem Jansens



Jan-Willem joined the Forest Trust staff in 1993 as a community forester. He has been a Guild partner, contractor, and professional member for two decades. He owns Ecotone Landscape Planning, LLC in Santa Fe, New Mexico.

About half of our forests are invisible because they are underground, in the soil. We often take that for granted or forget it's there. Yet, soil is the interactive engine, the self-generating medium, and self-healing environment that nurtures the visible forest – provided that the forest “in the light” is well balanced with the gases and heat in the atmosphere, the water flowing through the ecosystem, other plant and animal life, and human activities.

The Forest Stewards Guild is similar. Some of the Guild is in the limelight, but most of the Guild forms this huge network “underground” throughout the country doing the great work of

excellent forestry: Guild members, staff, forest owners, forest workers, students, donors, partners, and board members. After 25 years of self-generating and self-healing energy, the Guild's future lies in its unseen connections. In biomimicry terms, it lies in the mycelial threads between us that create the stable organic compounds of soil, the “humus” of good forestry.

Yet, societal and geophysical trends and transitions of the recent past have been tearing at the ecosystem balance of forests above and below ground, presenting great challenges to the Guild community. The last 25 years were dominated by a growing awareness of global climate disruption, as we experienced severe drought throughout the West and a considerable increase in megafires. The field of forestry lived through increasing mechanization, changes in forest safety management, shifting needs for worker training, and a surge of new, meaningful career opportunities for young people. Most recently, the novel coronavirus pandemic intensified the use of the Internet in communications and information technology. Moreover, we are in the midst of a worldwide questioning of ingrained power structures and socio-economic divides between genders, ethnic and racial groups, and economic classes. We must combine new ways of

doing our work with increased collaboration across ownerships and social and professional divides. We need ongoing identification of fields of knowledge that need further research, updating, and dissemination.

The Guild and its members are navigating many of these changes comprehensively. The Guild's community forestry program developed nationwide expertise in community-based wildfire management approaches. Guild staff engaged in organizing communities through the Fire Adapted Communities Network and other local and regional mechanisms, to mobilize and educate community members to lead and build awareness about wildfire management strategies. The Guild grew its youth training programs throughout New Mexico and used this model to inform other youth and young adult training programs in other regions. All this work has been highly collaborative. Building and coordinating local and regional coalitions has become a unique quality of the organization. As a result, the Guild is broadly and deeply networked, increasing its capacity, expertise, and reach nationwide.

With these strengths, the Guild is well equipped to build excellence in responsible forestry amid future challenges. I see opportunities, for example, in reaching out to new forest owners. Many millions of acres of land will change hands in the decades to

come. New forest owners will be eager to learn about critical forest management adaptations in our changing world. I hope in the West many private forest owners will join efforts by non-governmental organizations and state agencies – helped by state and federal wildlife corridor legislation – to connect their forests to growing connective pathways, for wildlife leading to refuges and biodiversity sinks of meaningful size and potential across the continent. I hope forest owners and Guild members will increasingly consider the forest under our feet. From carbon sequestration to water storage, the lower half of the forest plays a critical role in the resilience of forest ecosystems and life on Earth in the face of change.

The humus of excellent forestry we all contribute to will help us take on the opportunities and challenges of the years to come. Our connections will sustain the resilience and productivity in the Guild that helps us put the forest first in the next 25 years.



A soil profile shows the humus layer in an old piñon-juniper forest in northern New Mexico. Photo by: Jan-Willem Jansens



Collaborative prescribed burn in southwest Colorado on private land, 2016.



Forestry and conservation challenges, and focus for the future

Written by Jameson French



Jameson French is the CEO of New Hampshire based Northland Forest Products, current Board Chair of the Land Trust Alliance, and Vice-Chair of the American Forest Foundation.

At this moment, planning a week ahead seems almost impossible, so predicting what the next 25 years in land conservation and forestry management might look like feels like a Herculean task.

If we start with the current and unresolved issues facing private land-

owners, the forestry community, and land trusts across the United States, we have a reasonable basis for at least understanding the next decade. For private non-industrial landowners, whether they own grazing land in the Southwest or forest land in New England, the economic realities of long-term ownership and the possibility of passing the land onto another generation is the most significant challenge. *Can my land produce the revenue needed to cover expenses, make a small return, and still be managed sustainably? Can my family afford to keep the land after I am gone? What are the climate change impacts on my land and its value? Are there non-traditional revenue sources, like carbon credits, that could make retention a reality?*

For land trusts, the biggest stewardship concerns are the cost and legal responsibility around easements and how easements are impacted by the transfer of fee ownership to new generations or new owners. Even well-endowed land trusts have concerns about the cost of staffing for annual inspections and of legal action if there are violations.

For forest managers, the middle-of-the-night angst is lack of labor and forest industry infrastructure. *Where are the new foresters, loggers, truck drivers, and skidder operators going to come from? Why aren't more*

young people willing to make a living in or from the woods?

All these sectors have increased concerns about diversity and equity. Not only around staff, boards, membership, and engagement, but also around the deep-rooted inequities of land ownership and access to benefits the land provides, from food production to recreation and spiritual fulfillment.

In the coming decades, there must be deep and sincere engagement with diverse communities and creative ways to promote and support connections to the landscape.

Will we divert private and government resources to support more people of color owning land? Will there be a substantial investment in urban agriculture? Can we prioritize resources to make sure every American has open space for recreation close to where they reside? Will the owners, members, staff, supporters and boards of land trusts, forest companies, and organizations like the Guild reflect the demographics of the North American population?

I am optimistic this will happen.



A forwarder sorts wood during a white pine thinning in Rhode Island. Photo by: Christopher Riely

I am more concerned about the future of the forestry community and of the viability of the industry. Fairly soon, we may go through a period of serious retraction



Zander Evans discusses forest ecology with Forest Stewards Youth Corps members.

because of the lack of trained and experienced personnel. Our forests will suffer from climate change, fires, drought, and invasives. Lack of markets for lower grade material may stymie quality forest management.

However, in 25 years, perhaps the global impacts of climate change, population growth, and development will have such a huge negative impact on the world's forests that our North American wood basket, with millions of acres of protected working landscape will come into its own. With dramatically increased pricing and profitability, a new generation will want to be part of the forestry community and industry. Small private landowners will be able to get enough income to justify ownership. Land

trusts will have income from ecosystem services and sustainable harvests on their working lands. This could cover the costs of stewardship, reinvestment in access, and in the land banks to support diverse ownership. For this to happen, we will all need to fight hard to secure the political support and the resources needed, especially in the short term. We need to do everything we can to protect and nurture our forest resource in the meantime. We must also mentor and nurture the next generation of workers and leaders. Without their talents and determination, the future is bleak.

The Guild, along with many partners, are engaging in these activities already. Youth career development, landowner outreach and trainings, and learning exchanges are a few examples.

As a Guild member, supporting these efforts and participating in policy-making processes can go a long way to establishing what we want to see now and in the future of our field.

Forest Management in an Uncertain Climate Future

By Maria Janowiak, Northern Institute of Applied Climate Science, USDA Forest Service



My work at the Northern Institute of Applied Climate Science makes scientific information around climate, carbon, and forests more accessible and actionable to forestry and natural resource professionals. When we began this work with research partners more than 10 years ago, we struggled with a way to convey the complexity of integrating climate scenarios and model projections into forest management. We ultimately landed on the term “uncertain climate future” to highlight what was emerging as the key challenge for many: uncertainty.

Although we know that forests are complex and dynamic networks of countless interactions among diverse life forms, the addition of a changing and more variable climate can feel destabilizing. We receive many questions from practitioners who are trying to reconcile seemingly contradictory information from different scientific sources, or between what they read and their own experience in the woods.

We help managers cope with uncertainty, first by acknowledging that there are no easy solutions and that there is no single answer for how to manage a forest for climate change. We also developed a set of resources for integrating climate change into forest management planning and used it with thousands of managers (www.forestadaptation.org), including many Guild members.

The future has always been uncertain and unpredictable, but climate change forces us to confront this reality in new and different ways. An activity we use when engaging land managers is to ask them to think of a management project and begin by identifying actions that are beneficial to ecosystems both independent of climate change and when considering climate change.

► What are we already doing that we should keep doing?

For managers who already think about supporting the overall health and productivity of forests for the long-term (like Guild members), this will likely be a long list. It will probably include actions like reducing the impact of non-native invasive plants, promoting forest health in the face of existing and emerging threats, enhancing native plant diversity, and restoring important ecosystem traits or functions that were degraded in the past. These actions, many of which help enhance ecosystem resilience to a variety of climate and non-climate stressors, form the basis of good forest management and only become more important in our changing climate.

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Kevin Evans points out forestry features at the Dartmouth Second College Land Grant, a Guild Model Forest and site for long-term climate adaptation research.



This managed forest in Vermont demonstrates the alignment of managing forests with birds and climate adaptation in mind.





Part of managing for climate resilience is involving youth in stewardship. Last year, this group from Alvarez High School learned about strategies and contributed to solutions. Photo by: Christopher Riely

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Providence Water is managing forests to be better-adapted to future conditions, which includes experimenting with planting tree species from farther south on a number of sites. www.forestadaptation.org/providence
Photo by: Christopher Riely

Identifying these no- and low-regrets actions — the things we should do in most situations — gives us a better vantage point to then look for ways we should change our management from the current business-as-usual.

► What should we be doing differently?

This question brings uncertainty back, but in a more constrained and useful way where we can explore specific actions and situations. For example, more intense rain events might point to the need for additional waterbars or altered road design for timber sales, or an opportunity to increase riparian buffers in at-risk waterways. Brainstorming on this question, even if there are responses that are not practical or immediately actionable, begins a process for productively thinking about how forests and forest management may need to adapt. Some of these ideas that are not applicable to the task at hand, might be useful in a different location or in the future.

Next, I encourage managers to leave their comfort zones and suggest “wild and crazy” ideas for climate adaptation. The pragmatic nature of foresters means that even the wildest, craziest ideas often have merit or point to real issues that need further study, such as assisted migration of tree species to facilitate changes in suitable habitat. These suggestions inform new research projects, such as the Adaptive Silviculture for Climate Change trials (www.adaptivesilviculture.org).

Managing forests in the face of an uncertain climate future requires that we take the time to step away from the immediate tasks in front of us to think bigger and more holistically about forests — to consider complex ecosystem dynamics, long time scales, and changing conditions.

The Guild was founded on outside-of-the-box thinking. When Guild members gather, share ideas, or provide input, we collectively explore complex problems and successes from many angles and perspectives. This ability to collaborate, willingness to be open to new solutions, and the nature of our inquisitive thinking as a Guild community puts this organization at a leading edge in the climate challenge, even amid the uncertainty. Keep viewing uncertainty as an opportunity to learn, and at the very least our journey will be more enlightening.

The future of forestry research: Speculation on the next 25 years

Written by Justin Hart



Justin Hart is a Professional member on the Guild's Membership and Policy Council and a Professor at the University of Alabama.

Photos 1 - 3 on this page by Justin Hart



Graduate student Katelyn Morris records soil characteristics as part of the Terrestrial Ecological Unit Inventory (TEUI) on the Talladega National Forest. TEUI is a system to classify ecosystem types and map ecological units across spatial scales. This information is used for land-use planning to describe land capability and identify suitability for various uses.



Graduate students Davis Goode and Xandra Logan establish quadrats to measure woody plants near coarse woody debris to examine microsite influences on regeneration after catastrophic disturbance in longleaf pine woodlands.



Undergraduate technician Alaina Makowski measures the height of a sapling on a permanent plot on the Talladega National Forest. This is part of a long-term study to examine stand development and succession following catastrophic disturbance and salvage logging in frequently burned longleaf pine stands. Photo by Jonathan Kleinman

Let me be clear that I do not know where forestry research will be in 2045 when we celebrate the 50th anniversary of the Guild. I tend to be pragmatic and consumed with short-term study goals rather than long-term visions. Nonetheless, it is fun to speculate on questions we will address in forestry research in the coming decades and to consider the roles Guild members might play.

I have little doubt that global change will remain a major focus of forestry research, with climate change as a main theme. As models of projected climates are refined, researchers will need to continue efforts to understand how climate modification will manifest in forest ecosystems. Climate change is an enormous umbrella and I expect researchers will be increasingly exploring new forest-climate change interactions. Examples include:

- monitoring of plant, pest, and pathogen range migration,
- examination of ecological mismatches that might influence reproduction, dispersal, and other processes,
- altered forest disturbance regimes, and
- analysis of relationships between climate-induced stress, productivity, and plant competition dynamics, among others.

In some instances, forest developmental and successional pathways will be modified such that forests transition to alternative states. These complex interactions provide urgent and fertile ground for research.

Based on the increasing number of forest stresses, including novel stressors, and uncertainty of future conditions, I suspect we will see more research on approaches to enhance ecosystem adaptation potential. Research is needed on adaptation strategies, including their adoption and efficacy, as Maria Janowiak also points out in her article. This will require long-term investment on the part of researchers and stewards.

Global change is broader than climate change. Our society is evolving and the ways in which society values forests may be quite different in 2045. Markets, ownerships, and land uses will continue to shift, and we will need new decision support tools to inform long-term management. We must avoid the trap of technological momentum where the choices we make today constrain options in the future. Researchers and stewards need to think creatively to find approaches that maintain a range of options to account for future uncertainty.

Forestry research is largely applied research. Thus, it is critical we foster open communication between forest stewards and forest researchers. Management should be informed by the best available science, but the questions researchers study should address pressing needs of managers. This should be a positive feedback loop where researchers and stewards are increasingly satisfied by exchanges and increasingly motivated to collaborate. The Northern Institute of Applied Climate Science is engaging in some of this with the Guild and others already.

Ultimately, the next generation of scientists will strongly shape the future of forestry research. As an educator, I think it is critical for us to convey the importance of research to improve stewardship. We must instill in students a passion for lifelong learning. It is imperative we nurture budding scientists and provide them with the hands-on training and support needed to carry the torch. I am confident the Guild will continue to link researchers and stewards, disseminate new scientific findings, and mentor the next generation of foresters to advance our understanding of forests and the relationships between forests and society.



Address Service Requested

Building strength

The next 25 years will call for our best. The Forest Stewards Guild is comprised of some of the best and brightest in forestry, conservation, and natural resources. As we continue to innovate to meet challenges, let us remember to celebrate too. After all, this is the Guild's 25th anniversary and we have accomplished so much together! Thank you to everyone who has shared stories and photos of the impact the Guild has had in your lives, careers, and communities.

Our staff, members, supporters, and partners continue to provide exceptional resources, trainings, and forums for discussion online during this year's pandemic. To maintain our commitment to support practitioners and landowners, we've provided virtual series webinars and tours, online resource toolkits, and took great lengths to ensure safety during any program activities that still happened in person. Please stay tuned regularly to our events page and webinar library so you don't miss a beat. And now more than ever, reach out to Guild staff and fellow members for support when you need it in your efforts putting the forest first.

In this time of relative isolation, we continue to grow, empower, and diversify our community, connect with each other, and support the forests and communities who need us most. That is worthy of celebration.

Thank you all for your support. Please continue to stay engaged, donate, and offer your ideas as you are able. We are making a profound difference and its all possible because of you!

Find more details on our website:

<http://foreststewardsguild.org/events>

<http://foreststewardsguild.org/webinar-library>

<http://foreststewardsguild.org/supporting-forest-stewards>

Back cover photo by Dakota Wagner