WESTERN ASPEN ALLIANCE

TREMBLINGS

NEWSLETTER & BULLETIN BOARD

Vol. 12(3), August 2021

Partnering to preserve and restore healthy aspen ecosystems

MEMBER PARTICIPATION: The WAA is a virtual science-based community. Send us aspen-related publications, management plans, and media mentions and we'll help spread the word. Contact Paul Rogers, Director: p.rogers@usu.edu.

Share *Tremblings* with your friends and colleagues.

New members welcome! Sign-up here

WAA HAPPENINGS

Follow-up on Spring Fundraiser—This year's annual drive for membership donations yielded $2,065 for WAA operating costs. This is an approximately $700 dollar increase over our inaugural 2020 spring drive. Thanks to all who contributed! Based on our recent survey we are considering alternative methods of fundraising (See Commentary, p.2). Please consider a donation to the WAA within your budget. Funds go to administration of the WAA, as well as various forms of outreach, education, and resource development.

Pando Picture Book Release—For those of you who know budding naturalists or just enjoy a colorful, poetic children's book yourself, look for Kate Allen Fox's new book titled, "Pando: A Living Wonder of Trees" online now! Free registration for the live book release show August 22, 2021 may be found here.

Pando 360º Photo Survey Underway—Friends of Pando, under the leadership of WAA Steering Committee member Lance Oditt, launched perhaps the most ambitious 3D photo documentation of any forest in the world at the famed Pando aspen clone in Utah. With a volunteer squad of about 20 individuals and a 10-day run they captured 360º panoramic photos at some 70% of the ~8,400 photo points within the clone. Eventually, this work will provide a detailed record of conditions within Pando, as well as the ability to experience 3D virtual tours at the Friends of Pando website.

Sometimes plant-herbivore interactions simply arrive at our door. Here, sawfly (Nematus spp.) larvae devour young aspen leaves in the scientist-photographer's front yard in Madison, Wisconsin. How the larvae detoxify the high concentrations of salicinoid phenolic glycosides in leaves of young aspen is unknown, although many sawflies will regurgitate stomach contents as a defense when disturbed. (Photo: Rick Lindroth, UW-Madison).

Steering Committee Guard Changing—Thomas Adamson, long-term BLM liaison to the WAA, has moved on to greener pastures by taking a job at the BLM national office. Stan Kitchen, researcher and Steering Committee member since WAA's early years, is retiring at the end of August, 2021—though he will stay on for the time being as an advisor to the team. Linda Chappell, USFS Region 4 fuels specialist, who also served on this committee in recent years, has chosen the retirement path as well. Feel free to reach out to these extraordinary supporters of the WAA and wish them luck in their new endeavors. Thanks to all three of you!

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UPCOMING EVENTS

13th North American Forest Ecology Workshop—With the NAFEW virtual conference behind us (link presentations here), we are looking toward a full-blown in-person meeting in June 2022. The event will be held at Sault Ste. Marie, Ontario, Canada. NAFEW 2022 will be accepting bids for special sessions and presentation abstracts in the Fall of 2021. Check their website for details and updates.

Restoring the West, Virtually—Restoring the West, our annual applied forest restoration conference here at USU, is planning to hold a brief, virtual, program in October 2021. We are still working out the dates and speakers. Check the RTW website for details and updates.

Summer Aspen Workshop Updates—It's been an active summer of workshops scattered across the western U.S. Western Montana's first full workshop addressed mine waste/reclamation, avian communities, and management practices. In Utah, the focus was on fire ecology, restoration, and ungulate-aspen interactions. The largest of the workshops, Wyoming's 10th annual Aspen Days, takes place August 17-19 at Safari Club International's Granite Creek facility. Aspen Days will be examining wildlife habitat, chemical ecology, an ongoing bird survey, and management options.

If you wish to schedule a 2022 aspen workshop in your area, please contact WAA Director Paul Rogers.

COMMENTARY

Knowing the WAA Through Connection

Paul C. Rogers, Director, Western Aspen Alliance, Adjunct Associate Professor, Dept. Environment & Society, Ecology Center Associate, Utah State University, Logan, Utah

The Western Aspen Alliance (WAA) was founded in 2008 with a three-year start-up fund from Utah State University's Quinney Foundation. Envisioned as a partnership between USU and the U.S. Forest Service's research branch, the organization quickly attracted multiple partners in the form of state and federal agencies. Thus, a virtual organization was born with the primary function of bringing current aspen science to field practitioners. A secondary mission, to support active aspen research, involved facilitating interdisciplinary teams to address key issues. This basic structure, with science outreach overseen by a Steering Committee and research by a Science Advisory Panel, remains in place today.

But how are we actually serving our 680 members thirteen-years later?

The May 2021 *Tremblings* posted the quantitative results of our first user survey. Key findings included a membership of slightly older, more educated, male-leaning, and western-residing demographic. Not surprisingly, we are geographically scattered, but our greatest participation comes from the Rocky Mountain region. We also asked members their preferred method of contributing to the WAA's activities. Here we were surprised: by a significant margin those who completed the survey said they preferred modest monetary contributions (dues) over paying for individual administrative costs (e.g., travel, speaker fees, consulting costs). The second most common answer was willingness to assist with grant writing.

As director, I have great reluctance to impose mandatory dues—that may discourage membership, rather than grow it—in a voluntary organization such as this. Still, we are providing a consistent service that many members would not have the time to conduct individually. Additionally, our qualitative feedback (see below) suggests that many value the products coming from the WAA. For these reasons, we now recommend a $30 annual fee. To be clear, these "dues" are encouraged, not required. We welcome participation regardless of contributions. For context, the WAA currently receives no base funding from USU; rarther, we seek out agency grants and philanthropic donations. Every little bit helps!

Now, what was the user response to our survey prompts for suggested improvements? I cannot cover all the suggestions here, but I'll try to summarize accurately. An overwhelming plurality of responses simply applauded what we are already doing while acknowledging monetary limits on doing more. One illustrative comment says (all sources anonymous), "The

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resources you provide on management and the current applied research are quite useful." There are, however, concerns among our members that we are not spending enough energy examining livestock impacts and fire ecology/suppression. Some thoughtful suggestions for improvement included adding a WAA Twitter account, developing more education products (videos, curricula), techniques for explaining climate impacts on aspen, and expanding Wyoming's "Aspen Days" to other jurisdictions. Great ideas! We're listening and adjusting.

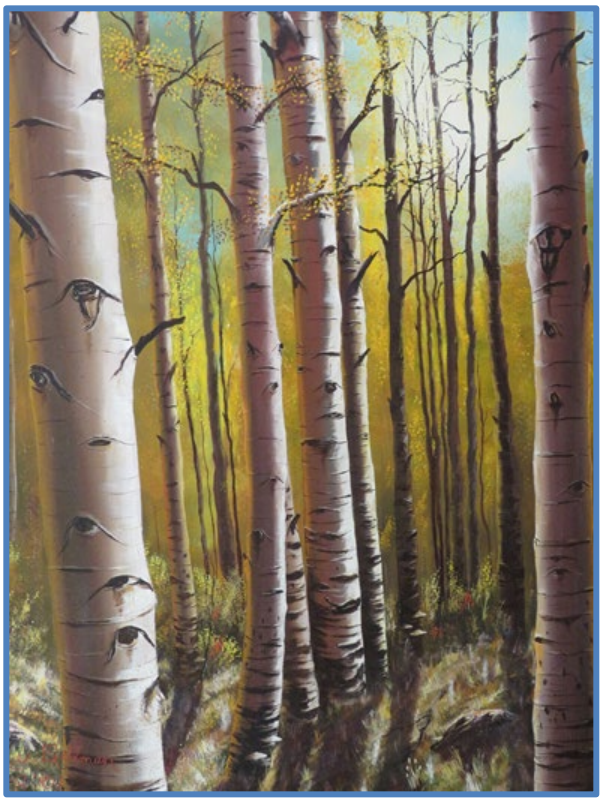
From one responder, "I love the work of WAA ... and consider it 'a point of hope' among western ecological challenges." This type of optimism encapsulates the top of the WAA's Olympic podium: kind words and a worthy challenge. Though there are 'barriers' in aspen conservation, we have yet to to fully explore the numerous 'bridges' available to us. The WAA envisions a cross-agency, inter-disciplinary, and trans-boundary horizon of aspen resilience. We aim to achieve that goal with the continued passionate support of our members. Thank you!

WAA *Creates*

WE NEED YOUR CREATIONS FOR UPCOMING *TREMBLINGS*!

"WAA Creates" showcases artistic aspen-related contributions. We encourage fiction, folklore, poetry, drawings, paintings, photography, and other artistic expressions. Send your stuff to share with WAA readers.

Untitled
(Oil on Canvas)



Lee Gillman
Denver, CO

The artist: *Colorado has magnificent aspen forests and the location for this painting could have been anywhere; the composition was purely from imagination. As an amateur artist, I took up oil painting when my wife was recovering from a series of back operations and we were not able to get to the mountains.*

RECENT ASPEN PUBLICATIONS

A word on Open Access: The Western Aspen Alliance strongly supports open access publishing (CC-BY). Articles with hyperlinks below are available for download and sharing following Creative Commons rules for attribution.

Boakye, E. A., Y. Bergeron, M. P. Girardin, and I. Drobyshev. 2021. Contrasting Growth Response of Jack Pine and Trembling Aspen to Climate Warming in Quebec Mixedwoods Forests of Eastern Canada Since the Early

Twentieth Century. Journal of Geophysical Research: Biogeosciences 126:e2020JG005873.

Boyd, M. A., L. T. Berner, A. C. Foster, S. J. Goetz, B. M. Rogers, X. J. Walker, and M. C. Mack. 2021. Historic declines in growth portend trembling aspen death during a contemporary leaf miner outbreak in Alaska. Ecosphere 12:e03569.

Brewen, C. J., J.-P. Berrill, M. W. Ritchie, K. Boston, C. M. Dagley, B. Jones, M. Coppoletta, and C. L. Burnett. 2021. 76-year decline and recovery of aspen mediated by contrasting fire regimes: Long-unburned, infrequent and frequent mixed-severity wildfire. Plos one 16:e0232995.

Crouch, C. D., A. M. Grady, N. P. Wilhelmi, R. W. Hofstetter, D. E. DePinte, and K. M. Waring. 2021. Oystershell scale: an emerging invasive threat to aspen in the southwestern US. Biological Invasions. doi.org/10.1007/s10530-021-02545-0.

Dai, Z., C. C. Trettin, A. J. Burton, M. F. Jurgensen, D. S. Page-Dumroese, B. T. Forschler, J. S. Schilling, and D. L. Lindner. 2021. Coarse Woody Debris Decomposition Assessment Tool: Model validation and application. Plos one 16:e0254408.

Dems, C. L., A. H. Taylor, E. A. Smithwick, J. K. Kreye, and M. W. Kaye. 2021. Prescribed fire alters structure and composition of a mid-Atlantic oak forest up to eight years after burning. Fire Ecology 17:1-13.

Hardenbol, A. A., M. den Herder, and J. Kouki. 2021. Long-term effects of prescribed burning, tree retention, and browsing on deciduous tree recruitment in European boreal forests. Canadian Journal of Forest Research 51:660-667.

Hart, A. T., M. Merlin, E. Wiley, and S. M. Landhäusser. 2021. Splitting the Difference: Heterogeneous Soil Moisture Availability Affects Aboveground and Belowground Reserve and Mass Allocation in Trembling Aspen. Frontiers in Plant Science 12:654159.

Jiawei Zhou, S. Z., Jie Wang, Hongmei Shen, Bin Ai, Wei Gao, Cuijun Zhang, Qili Fei, Daojun Yuan, Zhiqiang Wu, Luke R. Tembrock, Sen Li, Cuihua Gu & Xuezhu Liao. 2021. Chloroplast genomes in Populus (Salicaceae): comparisons from an intensively sampled genus reveal dynamic patterns of evolution. Scientific Reports 11:9471.

Kreider, M. R. 2021. Patterns of Post-Fire Aspen Seedling Establishment, Growth, and Mortality in the Western United States. MS Thesis. Utah State University, Logan, Utah.

Li, Z., K. F. Rubert-Nason, M. A. Jamieson, K. F. Raffa, and R. L. Lindroth. 2021. Root Secondary Metabolites in Populus tremuloides: Effects of Simulated Climate Warming, Defoliation, and Genotype. Journal of Chemical Ecology 47:313-321.

Reikowski, E. 2021. Herbivory by domestic and wild ungulates as drivers of aspen recruitment and understory composition throughout arid montane landscapes. MS Thesis. University of Nevada - Reno, Reno, NV.

Rubert-Nason, K. F., and R. L. Lindroth. 2021. Causes and Consequences of Condensed Tannin Variation in Populus. Pages 65-112 *in* Jess Dreher Reed, Victor Armando Pereira de Freitas, and S. Quideau, editors. Recent Advances in Polyphenol Research. John Wiley & Sons Ltd., Hoboken, New Jersey.

Šēnhofa, S., G. Šņepsts, K. Bičkovskis, I. Jaunslaviete, L. Liepa, I. Straupe, and Ā. Jansons. 2021. Availability and Structure of Coarse Woody Debris in Hemiboreal Mature to Old-Growth Aspen Stands and Its Implications for Forest Carbon Pool. Forests 12:901.

Song, X., R. I. Milne, X. Fan, S. Xie, L. Zhang, H. Zheng, L. Fan, J. M. Chung, M. G. Chung, and T. Ma. 2021. Blow to the Northeast? Intraspecific differentiation of Populus davidiana suggests a north-eastward skew of a phylogeographic break in East Asia. Journal of Biogeography 48:187-201.

Yun, R., Y. Jin, J. Li, Z. Chen, Z. Lyu, Y. Zhao, and D. Cui. 2021. The annual rhythmic differentiation of Populus davidiana growth–climate response under a warming climate in The Greater Hinggan Mountains. Global Ecology and Conservation 27:e01549.

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