WESTERN ASPEN ALLIANCE

TREMBLINGS

NEWSLETTER & BULLETIN BOARD

Vol. 12(1), February 2021

Partnering to preserve and restore healthy aspen ecosystems

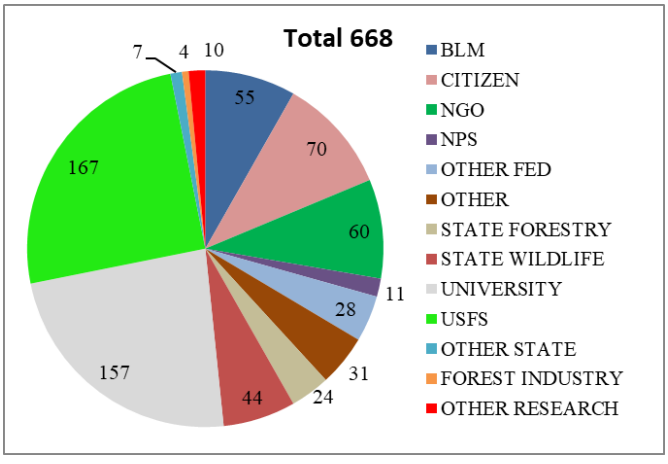
MEMBER PARTICIPATION: The WAA is a virtual science-based community. Send us aspen items of interest and we'll help spread the word. Contact Paul Rogers, Director: p.rogers@usu.edu.

Share *Tremblings* with your friends and colleagues.

New members welcome!

WAA HAPPENINGS

Who's in the WAA—Each year we print a compilation of WAA membership. As we gain momentum and attract new members, we also celebrate the diversity of voices found in varying locations, disciplines, and cultural alignments. Our prime users continue to be federal agency personnel and researchers, however a surge in citizen and NGO interest signals aesthetic, policy, and general civic concern about the fate of the aspen component in our natural world.



Had It With Remote Meetings?—The Western Aspen Alliance is looking to a future when we can meet again under the trembling leaves. In order to get us all there we just have to stay the safe CV19 course by keeping our distance from others, wearing those masks, and washing our hands consistently. Cases appear to be dropping and more folks are getting a vaccine; we're in this together!

Art Working for the WAA—Our WAA*Creates* featured artist this issue is J Brunner. J Brunner Fine Art will be donating 40% of his Pando gallery sales to the WAA. J's unique style captures the visceral glow of aspen forests, in this case the famed Pando clone of Utah, for others to enjoy using infrared techniques. You can visit J's gallery here and please share this amazing work with your associates.

Late afternoon sunlight heats an aspen leaf and casts its form into ice along the edge this basaltic boulder in central Utah. Although we think of aspen as being in winter repose, even fallen leaves are shaping their surroundings and eventually enriching the soil (Photo: Lance Oditt, WAA).

WAA Director Radio Interview—Dr. Paul Rogers was recently interviewed by BYU Radio's program "Constant Wonder." This is a wide-ranging interview, but touches on Pando, global aspen, predator-prey influences, and lawnmowers. Give it a listen and see what you think.

WAA To Survey User Community—The WAA will be sending out a special mailing in the coming months to

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garner input from members. We wish to better understand your needs, interests, and hopes for future direction. The survey will be concise, so as not to overburden your busy schedules. Our hope is that a brief survey will increase participation, as your feedback is valuable to us.

UPCOMING EVENTS

North American Forest Ecology Workshop—NAFEW will conduct a virtual, abbreviated conference on their normal odd-year schedule on June 21, 2021. The virtual mini-NAFEW will feature leading forest ecology speakers from Canada, Mexico, the U.S., as well as interactive sessions. Stay tuned for details on the 2021 half-day event at the conference website. Expect the return of a full-scale conference at Sault Ste. Marie, Ontario, Canada in 2022.

Aspen Workshops 2021—There are no definite dates set for next year at this time, but tentative proposals have been made for Jackson, Wyoming (Aspen Days series), Colorado/New Mexico (Western Landowners Alliance), Colorado Front Range (USFS, TNC, BLM, NPS), and California/Nevada (BLM, USFS, NDOW). Please contact WAA Director Paul Rogers if you have ideas about where additional aspen workshops might be held.

COMMENTARY

Aspen Forests, More Than Just Trees

Marc Coles-Ritchie, Utah Public Lands Manager, Grand Canyon Trust, Salt Lake City, Utah

Aspen forests are an iconic part of our western North America landscape. In the summer their lush green leaves are beautiful and the canopy provides refreshing shade. In the fall their orange, red, and yellow leaves deliver breathtaking color. Even in winter their white trunks and leafless branches create stark beauty where we snowshoe, ski, or drive. But if you spend time inside a healthy aspen forest during the growing season you will also experience a beauty in the diverse underlying plant community.

The understory of aspen forests can include spectacular tall wildflowers, lush grass, patches of shrubs, young aspen, and other trees. Some people are not familiar with healthy and robust understory plants of aspen forests because grazing by livestock (cattle and sheep) and wild ungulates (deer and elk) have removed much of that understory vegetation. Over the past 150 years we have introduced livestock to the landscape and we have increased the populations of deer and elk. Aspen forests can sustain a modest level of grazing, but in many parts of western North America excessive grazing has significantly altered the understory of aspen forests. In many cases this has resulted in the perpetual depletion of the understories of aspen systems.

The setting, especially as it affects soil moisture, will determine the potential type and abundance of understory plants. But regardless of the setting, healthy aspen forests should have robust and diverse understory communities. Healthy aspen forests generally have many tall forbs (wildflowers), a moderate amount of grass, varying amounts of shrubs, soil and rock lichens, and young aspen, which combine to create a dense understory that is difficult to see through and traverse. Depleted (e.g., overgrazed) aspen forests generally have fewer tall wildflowers, scattered shrubs, few if any young aspen, much bare ground and a very open understory that is easy to physically and visually navigate.

Aspen forests, both the trees and the understory, are important for wildlife. Aspen boles provide places for birds to build nests or excavate cavities. Fallen logs are important as shelter for other animals. And dense understory vegetation is important for hiding, nesting, bedding, and food.

Management of aspen forests is a major issue currently, and justifiably so, but we should not overlook the *entire* forest for the trees. In many places, aspen recruitment (young trees growing up to replace mature trees) is diminished or lacking due to excessive grazing. This threatens the existence of important forest components. Our management and restoration efforts must consider more than just trees; they must also include the maintenance and recovery of understory vegetation. Therefore, management of aspen forests needs to make understory vegetation a priority, in planning and

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monitoring, to make sure that it is sustained and improved with any stewardship actions. The goal of restoration should be to restore ecosystems as a whole, both in function and composition of communities, and understory plants are an integral part of aspen forests.

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.

The Eye of Pando

J. Brunner
Cape Disappointment, Washington

The artist: "Anthropomorphism is built into the human, a relic of trying to understand the unknown. Mystery creates wonder, and wonder invites me to learn... and so I found that aspens self-prune, resulting in the eye-like scars. This is far more important and fascinating than seeing eyes. Nevertheless, I still allow myself to feel watched periodically." J shoots with a medium format camera, a Pentax 645z, allowing for large print format with exceptional detail.

RECENT ASPEN PUBLICATIONS

Andrus, R., S. Hart, N. Tutland, and T. Veblen. 2021. Future dominance by quaking aspen expected following short-interval, compounded disturbance interaction. Ecosphere 12:e03345.

Crous, P. W., G. C. Adams, and L. M. Winton. 2020. Fungal Planet description sheets (*Neodothiora populina*). Persoonia 45:251-409 [p.324-225]. (New pathogen description affecting aspen in Alaska.)

Hogberg, J. I., B. D. Pinno, and M. D. MacKenzie. 2020. Evaluating foliar nutrient concentration as an indicator of soil nutrients in reclaimed and natural forests in Alberta, Canada. International Journal of Mining, Reclamation and Environment 34:75-87.

Inoue, S., Q.-L. Dang, R. Man, and B. Tedla. 2020. Photoperiod, [CO2] and soil moisture interactively affect phenology in trembling aspen: Implications to climate change-induced migration. Environmental and Experimental Botany 180:104269.

Ireland, K. B., M. M. Moore, P. Z. Fulé, L. Yocom, and T. J. Zegler. 2020. Warm, dry conditions inhibit aspen growth, but tree growth and size predict mortality risk in the southwestern United States. Canadian Journal of Forest Research 50:1206-1214.

Kreider, M. R., K. E. Mock, and L. L. Yocom. 2020. Methods for Distinguishing Aspen Seedlings from Suckers in the Field. Journal of Forestry 118:561–568.

Macdonald, J. A. 2020. Region-wide patterns and drivers of demographic rates for a foundation tree species along its dry range margin. University of Nevada - Reno, NV. [Thesis] 66 p.

Mekontchou, C. G., D. Houle, Y. Bergeron, and I. Drobyshev. 2020. Contrasting Root System Structure and Belowground Interactions between Black Spruce (*Picea mariana* (Mill.) BSP) and Trembling Aspen (*Populus tremuloides* Michx) in Boreal Mixedwoods of Eastern Canada. Forests 11:127.

Mergen, Z., C. J. Corley, G. Kostel, and D. E. Mergen. 2020. Quaking Aspen (*Populus tremuloides*) Growth Rate within the Black Hills of South Dakota. Proceedings of the South Dakota Academy of Science 99:83-91.

Oboite, F. O., and P. G. Comeau. 2020. Climate sensitive growth models for predicting diameter growth of western Canadian boreal tree species. Forestry: An International Journal of Forest Research: cpaa039.

Roman Dobarco, M., A. R. Jacobson, and H. Van Miegroet. 2020. Chemical composition of soil organic carbon from mixed aspen-conifer forests characterized with Fourier transform infrared spectroscopy. European J. of Soil Science. 1-21.

Sakihara, K. K. 2020. Aspen growth response in the presence of inter-annual climate fluctuation and disturbance in the Lake Tahoe Basin. Humboldt State University, Arcata, CA. [Thesis] 48 p.

Schwager, J. K. 2020. Aspen-dominated forest response to drought in the Lake States. Iowa State University, Ames, IA. [Thesis] 29 p.

Wang, X., Wang, B., Wang, C., Wang, Z., Li, J., Jia, Z., Yang, S., Li, P., Wu, Y., Pan, S. and Liu, L. 2021, Canopy processing of N deposition increases short-term leaf N uptake and photosynthesis, but not long-term N retention for aspen seedlings. New Phytologist: 17041. https://doi.org/10.1111/nph.17041

Westbrook, C. J. 2021. Beaver as agents of plant disturbance. Plant Disturbance Ecology. Elsevier. pp. 489-528.

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