WESTERN ASPEN ALLIANCE

TREMBLINGS

NEWSLETTER & BULLETIN BOARD

Vol. 12(2), May 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 products 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

WAA's Spring Fundraiser is Back—Once a year the WAA gently prods for donations to keep our root network thriving. This is the 2nd annual fundraiser following on the heels of our recent member survey where we received solid feedback on the topic of member dues (p.6). We haven't reached a final decision yet on annual dues, so for the time being we will stick with voluntary contributions. Please consider a donation to the WAA within your comfort level. Funds go to administration, *Tremblings* compilation, travel and workshops, webinars, individual consultations, and maintaining USU's Aspen Bibliography (world's largest online aspen reference database!). We are grateful for your support and participation in whatever form it comes.

First WAA Survey Results—This issue of *Tremblings* includes a special addendum (p.5-6) with some preliminary results of our first member survey. The survey garnered a 34% participation rate; not bad for a first-time effort (232 responses of 674 members). Over the summer we will take a deeper look at responses, particularly written comments, and make WAA adjustments based on that input. This feedback will also contribute to Director Rogers' August assessment on future directions of the WAA. We are very grateful to all those who took the time to complete the survey!

Long-term Aspen Plan in Colorado—The White River National Forest has just completed a public comment period on a multi-decade plan to conduct mechanical and fire treatments to enhance aspen cover. This ambitious plan will unfold over an area of roughly 375,000 acres (151,757 ha) in response to aspen decline resulting from "drought, insects, disease, wildfire suppression, and browsing pressure." A March 3 article from the *Sopris Sun* explores the proposed plan from several angles. You may find the full plan and related documents on the White River NF project website.

Spring slides into place and new aspen leaves emerge. This sapling along Alaska's Copper River in Wrangle-St. Elias National Park is also providing ample nutrition for a local beaver, by the looks of it. Perhaps there is cause and effect here, too: damage to the parent commonly leads to a surge in new growth. (Photo: Lance Oditt, WAA).

New Friends of Pando Website—A new locally-based Friends of Pando group has officially launched their website with the mission of, "Working to educate the public about the tree, support science, and inspire stewardship." Among various education and cultural programs, FOP is also directing donations, resources, and volunteers toward research and restoration work. This summer FOP will also undertake an intensive

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photographic survey using volunteer and student groups to document Pando with more than 8,600 360º photos and making that record freely available for study! This ambitious undertaking may be among the most detailed photo surveys of a forest ever conducted.

UPCOMING EVENTS

North American Forest Ecology Workshop—NAFEW will conduct a virtual, half-day conference on their normal odd-year schedule on June 21, 2021. Speakers have now been announced: Dr. Linda Nagel (Colorado State Univ.), Dr. Mike Dockry (Potawatomi Nation/Univ. Minnesota), Dr. Cindy Prescott (Univ. British Columbia), and Dr. Tarin Toledo Aceves (Instituto de Ecología, Mexico). You may find out more and register for the event at the conference website. Expect the return of NAFEW's multi-day in-person conference at Sault Ste. Marie, Ontario, Canada in June, 2022.

Aspen Summer Workshops 2021—The following summer aspen workshops are now scheduled:

- Western Montana Aspen Workshop, Sugar Loaf Lodge (near Anaconda), July 20-22. Contact: Emily Harkness (High Divide/Heart of the Rockies).
- Southern Utah Aspen Workshop, near Cedar City, Aug. 3-4. Contact: Stanley Gurley (Natural Resource Conservation Service).
- 10th Annual Aspen Days, near Jackson, Wyoming, Aug. 17-19. Contact: Ian Tator (WY Game & Fish).

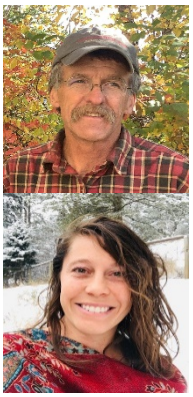
Please contact WAA Director Paul Rogers if you have inquiries or would like to host an aspen workshop in your area.

COMMENTARY

District-wide Aspen Habitat Restoration

Don DeLong, Wildlife and Habitat Program Mgr., West Zone of Bridger-Teton National Forest (BTNF), Afton, Wyoming

Ashley Egan, Wildlife Biologist, BTNF, Jackson, Wyoming



A habitat restoration project on the Greys River District is intended to tackle a host of wildlife issues, and our highest priority will be restoring a more natural balance of succession stages in aspen, big sagebrush, and mountain shrubland communities. Particular to aspen, the 2009 Greys River District Aspen Assessment doubled the known acreage of aspen and it identified 84% of the aspen acreage on the district as being overtopped by conifers by moderately-high to very-high degrees. Aspen stands in advanced stages of succession are given the highest priority for treatment. The best assurance against declines in biological diversity, which generally corresponds with the amount of thriving aspen, is to approximate the conditions under which native wildlife communities existed prior to Euro-American settlement (2012 Planning Rule of the U.S. Forest Service). We undertake this project knowing we face ongoing challenges of climate change and invasive species.

Treatment types, which will depend on the habitat community, restoration issues, and other constraints, will likely include mechanical treatment of conifers and prescribed fire within aspen, big sagebrush, and mountain shrubland communities; cheatgrass and invasive species eradication treatments; mechanical treatment of young conifer within whitebark pine and south-slope Douglas fir stands; and possibly research on several different ways to restore altered tall forb communities and riparian restoration that integrates the relationship between beaver, aspen, and fire. Aspen, big sagebrush, and mountain shrubland communities oftentimes are juxtaposed, which will facilitate coordination of treatments.

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The U.S. Forest Service is working closely with Wyoming Game and Fish Department, Interagency Fire Effects, U.S. Fish and Wildlife Service, Wyoming Wild Sheep Foundation, Western Aspen Alliance, University of Wyoming, Wyoming Wildlife Federation, Rickets Conservation Foundation, and Wyoming Governor's Big Game License Coalition to accomplish this project. Additionally, wildlife biologists, fire ecologists, vegetation specialists, and many other resource disciplines are involved in identifying prospective treatment areas on the Greys River District. Prioritization of treatment areas are based on threats to aspen sustainability, big game habitat needs, and limitations like susceptibility to cheatgrass invasion, Canada lynx management constraints, and potential for post-treatment off-highway-vehicle trail creation.

The process of identifying the best places to implement habitat treatment projects across the 290,000-acre (117,359 ha) landscape of the Greys River District is facilitated by dividing the district into 100 habitat units (Figure) and 21 GIS layers. Each unit in the map tracks to a spreadsheet that captures multiple habitat characteristics, treatment needs, ecological vulnerabilities, and constraints for that area. Planning aspen and other habitat treatments at a landscape scale will greatly improve our ability to meet aspen restoration objectives in a meaningful way across the District; contribute to Wyoming Game and Fish Department's mule deer, elk, and moose population objectives; and conserve migratory birds, western toads, pollinators, and many other wildlife species.

This coming season the District hopes to implement a small aspen patch treatment project consisting of 20 sites, totaling 5-8 acres (2-3 ha). The purpose of this initial project is to prevent remnant old-age aspen trees from dying without being replaced by young aspen. Rejuvenation of aspen has indirect implications for myriad dependent plants and animals, including mule deer, elk, moose, and numerous birds and pollinators.

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.

Shedding Aspen
(Acrylic on Canvas, original size)

Danny Rob
Logan, UT

The artist: *I love how vibrant and green Aspen's leaves can be in the summer, but I love even more how they supply the yellow colors of Autumn!* You can see more of Danny's work on Instagram at Parasox.art.

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.

Bandau, F., B. R. Albrectsen, K. M. Robinson, and M. J. Gundale. 2021. European aspen with high compared to low

constitutive tannin defenses grow taller in response to anthropogenic nitrogen enrichment. Forest Ecology and Management 487:118985.

Boča, A., A. R. Jacobson, and H. Van Miegroet. 2020. Aspen Soils Retain More Dissolved Organic Carbon Than Conifer Soils in a Sorption Experiment. Frontiers in Forests and Global Change 3, DOI: 10.3389/ffgc.2020.594473.

Comeau, P. 2021. Effects of Thinning on Dynamics and Drought Resistance of Aspen-White Spruce Mixtures: Results From Two Study Sites in Saskatchewan. Front. For. Glob. Change 3:621752.

Cope, O. L., R. L. Lindroth, A. Helm, K. Keefover-Ring, and E. L. Kruger. 2021. Trait plasticity and tradeoffs shape intraspecific variation in competitive response in a foundation tree species. New Phytologist 230:710-719.

Dagley, C. M., J. P. Berrill, S. A. Coppeto, and A. K. Eschtruth. 2020. Understory responses to restoration in aspen-conifer forests around the Lake Tahoe Basin: residual stand attributes predict recovery. Restoration Ecology 28:603-611.

Dove, N. C., D. M. Klingeman, A. A. Carrell, M. A. Cregger, and C. W. Schadt. 2021. Fire alters plant microbiome assembly patterns: integrating the plant and soil microbial response to disturbance. New Phytologist: https://doi.org/10.1111/nph.17248.

Kreider, M. R., and L. L. Yocom. 2021. Aspen seedling establishment, survival, and growth following a high-severity wildfire. Forest Ecology and Management 493:119248.

Kuzmin, A., L. Korhonen, S. Kivinen, P. Hurskainen, P. Korpelainen, T. Tanhuanpää, M. Maltamo, P. Vihervaara, and T. Kumpula. 2021. Detection of European Aspen (*Populus tremula* L.) Based on an Unmanned Aerial Vehicle Approach in Boreal Forests. Remote Sensing 13:1723.

Liu, X., and F. Biondi. 2021. Inter-specific transpiration differences between aspen, spruce, and pine in a sky-island ecosystem of the North American Great Basin. Forest Ecology and Management 491:119157.

Niazai, A., A. Osawa, N. Kurachi, T. Miyaura, T. Kajimoto, J. M. Metsaranta, M. Dannoura, and N. Okada. 2021. Application of a *u-w* method for the detection of boreal forest response to environmental changes in Canada. Journal of Forest Research:1-11.

Neufeld, H. S., and F. S. Perkins. 2021. Host tree species mediate corticolous lichen responses to elevated CO_2 and O_3 after 10 years exposure in the Aspen-FACE system. Science of The Total Environment 764:142875.

Ruess, R. W., L. M. Winton, and G. C. Adams. 2021. Widespread mortality of trembling aspen (Populus tremuloides) throughout interior Alaskan boreal forests resulting from a novel canker disease. Plos one 16:e0250078.

USDA Forest Service, White River National Forest. 2021. White River Aspen Management Project. USDA Forest Service, Glenwood Springs, CO. 25p.

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

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Emmon H. Rogers, *Tremblings* Reviewer/Editor, Kitsap Regional Library, WA

Lance Oditt, WAA Photographer At-Large, Studio 47.60° North, Seattle, WA: Email

Website: http://www.western-aspen-alliance.org/

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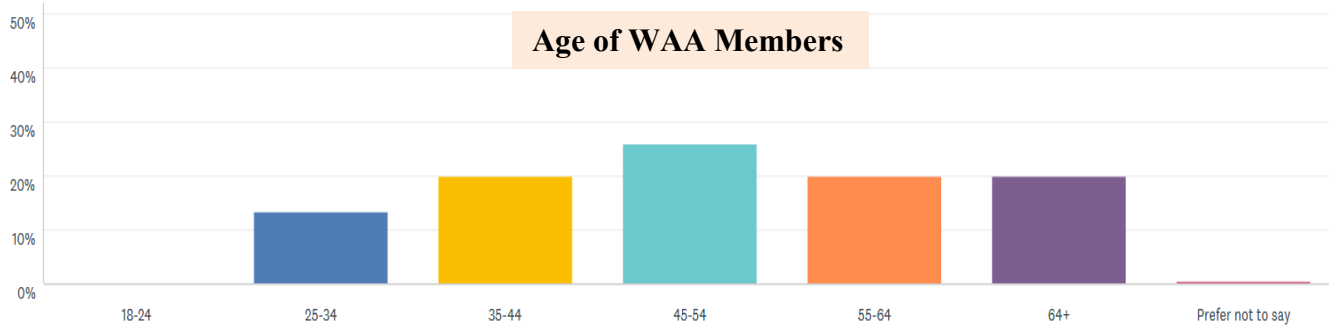
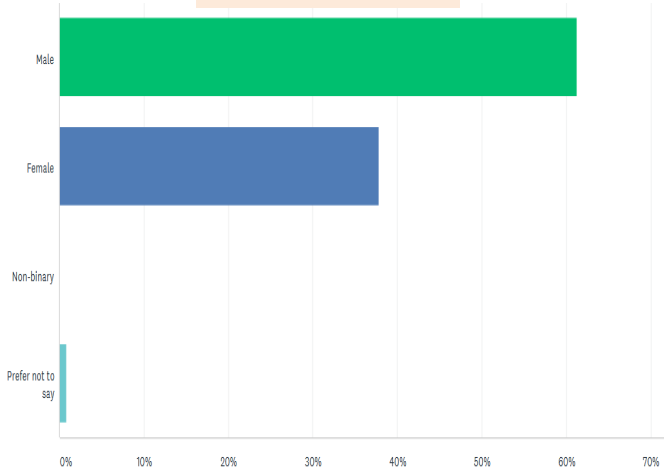
WAA SURVEY RESULTS

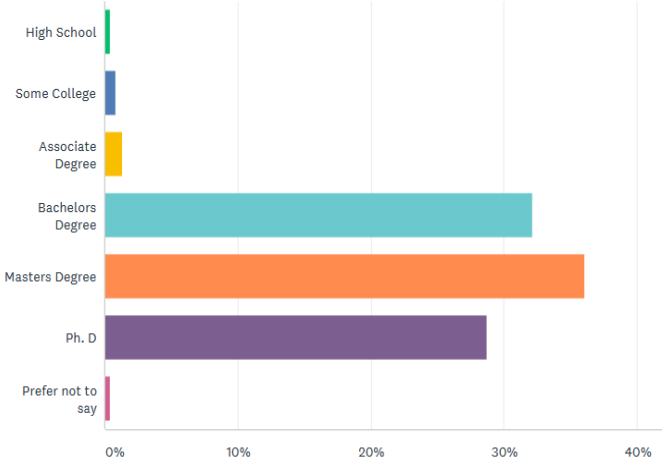
Age of WAA Members



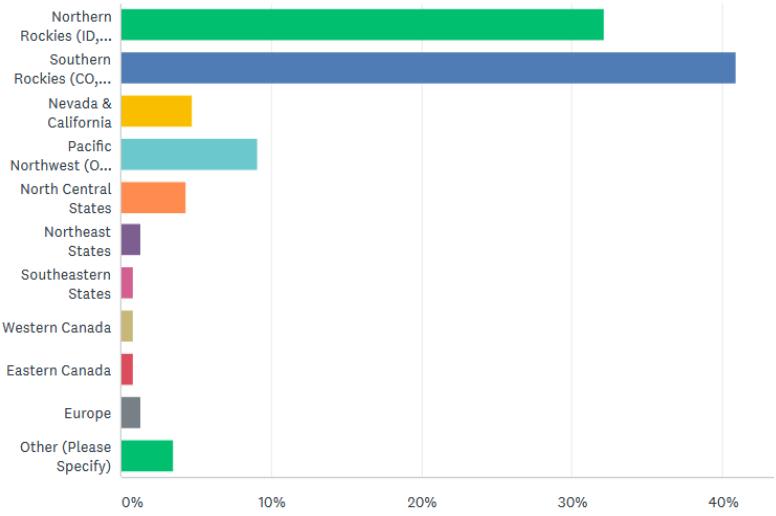
Sex of Members



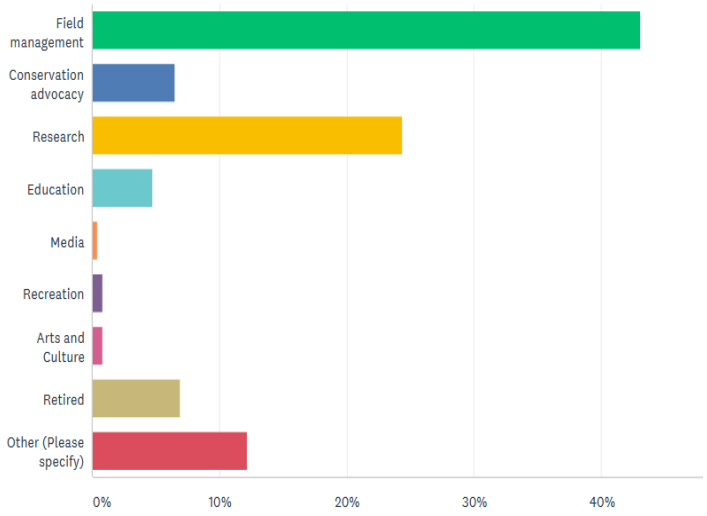
Education of Members



Region of Members



Primary Work of Members



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