



TREMBLINGS

NEWSLETTER & BULLETIN BOARD

Vol. 11(1), February 2020

Partnering to preserve and restore healthy aspen ecosystems

MEMBER PARTICIPATION: The WAA is a science-based virtual 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!

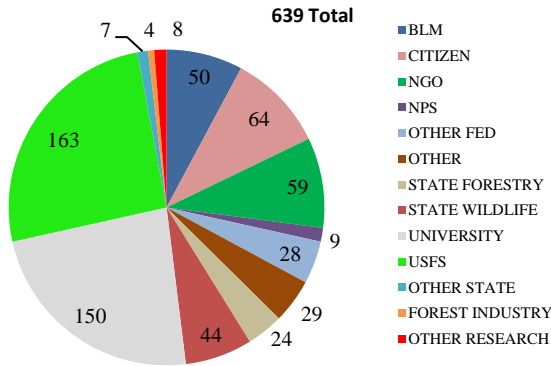
search engine, please [email us](#). We are also looking for feedback on how the map works for users; we would love to hear [your comments](#).



The photo shows a seral aspen-subalpine fir forest in northern Utah following 20" (0.51 m) of new snow. A deep snowpack bodes well for summer runoff, but climate projections suggest lower elevation precipitation will increasingly arrive as rainfall, reducing water storage in montane forests (Photo: [Paul C. Rogers](#)).

WAA HAPPENINGS

Annual Status of WAA Membership—The WAA continues to be used as a clearinghouse of current aspen science and management information. Membership of the WAA has grown by 37 users in 2019. The U.S. Forest Service continues to lead participation, with all university affiliated users comprising the second largest group.



Additionally, the WAA Facebook page has grown to 129 followers as of January 2020.

Aspen Spatial Bibliography Feedback—Brigham Young and Utah State Universities have built a framework for finding aspen research by geographic location. We hope the [Aspen Spatial Bibliography](#) is a useful tool for the WAA community. We are looking for volunteers to help populate/quality control the Aspen Bibliography web map using ArcGIS Online (editing/georeferencing entries). If you are interested in helping improve this online

Help Document Aspen Seedling Events—Are you aware of any unpublished aspen seedling events in the western U.S? Mark Kreider, a graduate student at Utah State University, is building a database of aspen seedling events with which to study sexual regeneration patterns. Contact Mark [here](#).

Aspen's Role in World Conservation—Six species of aspen encircle the northern hemisphere. These species play similar roles in supporting high levels of biodiversity. As “keystone” species, when aspen dwindle or thrive dependent plants and animals follow parallel trajectories. A first of its kind world

compendium of aspen stresses a “mega conservation” theme and strives to initiate further international collaboration to sustain these important ecosystems that face similar threats, such as development, fire suppression, herbivory, warming climate, and active aspen denudation to favor conifer fiber production.

IMAX Film Opening Feb. 2020—“Into America’s Wild” (“Into Nature’s Wild” internationally) will debut to public audiences Feb. 14 in the U.S. You can view [the trailer](#) from MacGillivray Freeman films now. The film features WAA Director Paul Rogers and the Pando clone along with numerous other locales. The movie is narrated by [Morgan Freeman](#).

Send Your Flashy Photos—We’d like to post your best aspen photos on the [WAA Facebook](#) page. [Send us](#) pictures that are artistic, unique, ridiculous, or sublime.

UPCOMING EVENTS

Winter Workshop at Estes Park—Rocky Mountain National Park will host a one-day aspen workshop at Estes Park, CO Feb. 19, 2020. The theme of this event will be managing lodgepole pine and aspen systems to reduce fire hazards near developed areas of the Park. Leading aspen and forest ecology experts will be on hand to present current science and problem-solve with agency officials. For more information contact [Nate Williamson](#), RMNP Fire Ecologist.

Conservation Biology Conference—The [North American Congress for Conservation Biology](#) will hold their annual conference in Denver, Colorado July 26-31, 2020. The conference theme is “Crossing Boundaries: Innovative Approaches to Conservation” and promises to be an engaging event covering a range of topics surrounding social, political, and ecological boundaries with a focus on the Rocky Mountain West.

Natural Areas Conference, Aspen Session—Planning is underway for the [Natural Areas Association](#) conference in Reno, NV Oct. 13-16, 2020. The WAA will be leading a Special Session

addressing quaking aspen issues in the West. We anticipate a full-day aspen session covering many science-management issues, including ungulate herbivory, climate warming, fire ecology, and development pressures. Contact [Paul Rogers](#) if you’d like more information on this event.

Aspen Workshops 2020—Proposed, but *not yet finalized*. We’d [like to hear](#) your thoughts about these workshop dates, locations, and topics:

- **Wyoming Aspen Days:** Cody or Baggs, Wyoming. Date TBD.
- **Markleeville, CA Aspen Workshop:** This was canceled in fall 2019, but we are searching for June 2020 dates now to reschedule. Contact [Coreen Francis](#), NV/CA Forestry Lead for BLM.
- **Dillon, Montana:** Sponsored by USFS, WAA, BLM, and others. July 2020, Dates TBD.
- **Other Mentions:** Colorado, Alaska, and Idaho have discussed possible events. Check in later.
- **Other Aspen Events in Your Area?** Contact the [WAA Director](#) and let us know your plans.

COMMENTARY

Walt Mueggler: Aspen Scientist Extraordinaire

Dale L. Bartos, Aspen Ecologist (retired), US Forest Service, Rocky Mountain Research Station



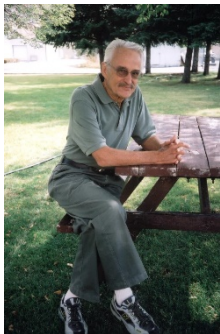
Walter F. Mueggler passed away in Logan, Utah on September 4, 2019 at the age of 93. Most of his long and successful career was spent working for Forest Service Research in the Intermountain West. He epitomized the ethos of Forest Service Research, where he spent most of his career. In 1987 he retired after spending approximately 40 years with the agency. This long and productive career focused mainly on the ecology of mountain grasslands and aspen ecosystems. In addition, as Emeritus Scientist with the Rocky Mountain (formerly Intermountain) Research Station he volunteered on a regular basis for approximately 20 years. That time was spent at the Forestry Sciences Lab in Logan where he analyzed

data archives and developed manuscripts so this work would become a part of natural resources literature.

His knowledge will continue to influence our understanding and management aspen forests and rangelands in the western U.S. for many generations to come.

Walt's formal education in Ecology was tied to some of the most profound Ecologist in North America including John T. Curtis, U. of Wisconsin-Madison. Curtis was considered a pioneer in the science of Ecology. Walt earned his B.S. in Forestry from the U. of Idaho in 1949; his M.S. in Ecology from U. of Wisconsin-Madison under Grant Cottam who was a student of Curtis in 1953; and in 1961 his PhD. in Plant Ecology from Duke University under Henry J. Oosting, another renowned North American ecologist.

During his Forest Service career he conducted research in the Interior West, primarily on aspen ecosystems, mountain grasslands, and community type classifications for aspen in the Central and Northern Rockies.



*Walter F. Mueggler
2006 RNA celebration*

After his retirement, colleagues lobbied the Forest Service for the establishment of a Research Natural Area (RNA) that would be named in his honor. This was accomplished in 2006 when the Forest Service established a 1,268 acre RNA which is within the Mt. Olympus Wilderness in Big Cottonwood Canyon east of Salt Lake City. This area was named the Walter F. Mueggler Butler Fork Research Natural

Area—an appropriate homage for one who's name is so closely tied to the field. This watershed contains near pristine examples of aspen vegetation types as well as a diverse mixture of other communities.

On behalf of the Forest Service, resource managers expressed their appreciation for Walt's examples of dedication and excellence in research. His work is used extensively in the protection and management of western ecosystems. Community type classifications (especially for the aspen type) are used extensively by Forest Service (Region 4) and The Nature Conservancy professionals.

Walt was a highly knowledgeable individual and didn't hesitate to share this wisdom with fellow researchers, managers, citizens, and students. During his career he was involved with numerous students at Utah State University and Montana State University. His work will live on via his manuscripts and wisdom that was such an important part of his long and productive Forest Service career. Personally, I owe Walt a debt of gratitude for all his efforts in guiding me to become the professional that I became. I will miss our discussions on natural resource matters, especially understanding the functioning of western aspen ecosystems.

WAA Creates

"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.

Significant (oil on canvas)



Jordan Daines
Park City, Utah



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The artist: *This painting is the second in a series by Jordan (See Vol. 10[1]). Her linear abstract oil paintings lead you to become deeply immersed in the spirit of an aspen grove. Jordan strives to capture the feeling and emotion inspired by aspen forests. Aspen are a frequent subject of her work.*

Jordan's work is displayed at [Pando Fine Art](#).

RECENT ASPEN PUBLICATIONS

- Angle, J., and B. Taylor. 2019. Cougars and Bears and Wolves, Oh Elk! *Science Scope* 42:42-55.
- Barker, H. L., J. F. Riehl, C. Bernhardsson, K. Rubert-Nason, L. Holeski, P. K. Ingvarsson, and R. L. Lindroth. 2019. Linking plant genes to insect communities: identifying the genetic bases of plant traits and community composition. *Molecular Ecology* 28:4404–4421.
- Beschta, R. L., L. E. Painter, and W. J. Ripple. 2019. Trophic cascades and Yellowstone's aspen: A reply to Fleming (2019). *Forest Ecology and Management* 454:117344.
- Beschta, R. L., and W. J. Ripple. 2019. Large carnivore extirpation linked to loss of overstory aspen in Yellowstone. *Food Webs* 22:e00140.
- Blonder, B., B. J. Graae, B. Greer, M. Haagsma, K. Helsen, R. E. Kapás, H. Pai, J. Rieksta, D. Sapena, and C. J. Still. 2020. Remote sensing of ploidy level in quaking aspen (*Populus tremuloides* Michx.). *Journal of Ecology* 108:175-188.
- Cope, O. L., E. L. Kruger, K. F. Rubert-Nason, and R. L. Lindroth. 2019. Chemical defense over decadal scales: ontogenetic allocation trajectories and consequences for fitness in a foundation tree species. *Functional Ecology* 33:2105-2115.
- Li, J., G. Liu, Q. Lu, Y. Zhang, G. Li, and S. Du. 2019. Future Climate Change Will Have a Positive Effect on *Populus davidiana* in China. *Forests* 10:[1120](#).
- Maxwell, J., and S. St. Clair. 2019. Snowpack properties vary in response to burn severity gradients in montane forests. *Environmental Research Letters* 14:[124094](#).
- McIlroy, S. K., and D. J. Shinneman. 2020. Post-fire aspen (*Populus tremuloides*) regeneration varies in response to winter precipitation across a regional climate gradient. *Forest Ecology and Management* 455:117681.
- Miller, S. 2019. Everyone In: A Road Map for Science-Based, Collaborative Restoration of Western Quaking Aspen. USDA, Forest Service, Rocky Mountain Research Station, Fort Collins, CO. Issue 37. 11p.

Nenzén, H. K., D. T. Price, Y. Boulanger, A. R. Taylor, D. Cyr, and E. Campbell. 2020. Projected climate change effects on Alberta's boreal forests imply future challenges for oil sands reclamation. *Restoration Ecology* 28:39-50.

Rogers, P. C., and J. Šebesta. 2019. Past Management Spurs Differential Plant Communities within a Giant Single-Clone Aspen Forest. *Forests* 10:[1118](#).

Rogers, P. C., B. D. Pinno, J. Šebesta, B. R. Albrechtsen, G. Li, N. Ivanova, A. Kusbach, T. Kuuluvainen, S. M. Landhäusser, H. Liu, T. Myking, P. Pulkkinen, Z. Wen, and D. Kulakowski. 2020. A global view of aspen: Conservation science for widespread keystone systems. *Global Ecology and Conservation* 21: [e00828](#).

Sobuj, N., V. Virjamo, K. Nissinen, U. Sivadasan, L. Mehtätalo, L. Nybakken, H. Peltola, and R. Julkunen-Tiitto. 2019. Responses in growth and phenolics accumulation to lateral bud removal in male and female saplings of *Populus tremula* (L.) under simulated climate change. *Science of The Total Environment* 704:135462.

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