TREMBLINGS

NEWSLETTER & BULLETIN BOARD

Vol. 8(2), May 2017

"…partnering to preserve and restore healthy aspen ecosystems."

NOTICE: The WAA is a user-driven organization. Please send news items and announcements, contributions, **recent reports & publications**, photos, and commentary ideas or rebuttals to Paul Rogers, Director/Editor: p.rogers@usu.edu. We encourage you to share *Tremblings* with your friends and colleagues. **New members welcome!**

WAA HAPPENINGS

Aspen Artwork Requested—The WAA is looking for your creative ideas for future *Tremblings*. Contact the WAA Director if you have interest in posting brief stories, poems, paintings, photography, or other original works. See "WAA Creates" section at the end of this or previous *Tremblings* for examples.

Aspen Field Guide Published—A new field guide entitled, "Guide to Quaking Aspen Ecology and Management," authored by WAA Director Paul Rogers, will be available in May/June of 2017 (see Recent Publications below). This field guide synthesizes recent advances in aspen science for field application. Most aspects of the guide will apply to all aspen communities, though some weight is given to situations common on BLM lands (e.g., low, dry, aspen landscapes). Contact WAA Director or check the WAA Facebook page for how to obtain copies.

Pando Briefing—A new *WAA Brief* describes the giant aspen clone known as "Pando" in south-central Utah. In addition to basic background information on this genetically identical grove of 106 acres (43 ha), the two-page document presents information on recent successful regrowth, as well as future efforts to restore Pando. A link to all *WAA Briefs* can be found here.

Like us on Facebook—Get regular updates on events, see photos, and trade experiences. Follow us now on FB and pass it on!

Roughened bark provides habitat for diverse epiphytes. This photo depicts lung lichen (Lobaria pulmonaria)*, other lichens, and mosses on aspen in Alaska. European aspen commonly possesses rougher bark and greater lichen diversity, too. This contrasts markedly with smooth bark texture and limited epiphyte habitat in the drier western U.S. (Photo: Paul Rogers, April 2016).*

UPCOMING EVENTS

NAFEW 2017—The University of Alberta (Edmonton) is hosting the 11th North America Forest Ecology Workshop. The conference runs from June 19-22, 2017. The theme will be: *Sustaining Forests from Restoration to Conservation*. There will be a Special Session on the North American aspen transect, as well as many other aspen-related posters and presentations. The conference will include one-day in-conference field trips to see both natural and

Western Aspen Alliance

TREMBLINGS

NEWSLETTER & BULLETIN BOARD

Vol. 8(2), May 2017

industrial landscapes. Further details and regular updates can be found at the conference website.

Central Idaho Workshop—The Salmon Valley Stewardship, USFS, BLM, state forest and wildlife agencies, and the WAA will be hosting an aspen workshop in Salmon, Idaho, July 11-13. The goal of the collaborative workshop will be to inform managers, citizens, and other interested stakeholders about current aspen science in the context of central Idaho's forest and wildlife concerns. Expected outcomes are broad aspen ecology understanding and potential avenues for aspen restoration and monitoring. Contact Jenny Gonyer for more details about this event.

Wyoming Aspen Days 2017—The annual series called "Aspen Days" moves to northeast Wyoming in 2017. The WAA and Wyoming Game & Fish present a 2.5 day workshop in Buffalo, WY from August 16-18. This multi-agency, NGO, and citizen event will feature aspen science, case studies, and extensive field discussions. Further information is available from Todd Caltrider, Habitat Biologist, WYGF.

Alaska Aspen Workshop—The WAA will be partnering with the BLM and Alaska Department of Fish and Game to conduct our first boreal aspen workshop September 12-14, 2017. The overarching goal is to communicate recent science to forest and wildlife managers while addressing local issues in field settings. The event will begin in Fairbanks with science and management presentations, then proceed to several field sites across a wider region of north-central Alaska. For further details contact Sue Rodman, Alaska Fish & Game.

Aspen Science Special Session—Northern Arizona University will be hosting the Biennial Conference of Science & Management on the Colorado Plateau and Southwest Region Sept. 11-14, 2017. The WAA is sponsoring this proposed Special Session entitled, "Bringing Science and Management Together to Restore Resilient Aspen Forests." The session has not yet been officially accepted; if interested contact facilitated by Katie Ireland, Department of Ecology, Montana State University.

COMMENTARY

Restoring Aspen with Citizens and Science

Jim Shuler, MD - Wolf Creek Ranch Homeowner

In 2010, I went from being a retired eye surgeon to being a "citizen scientist." I live on Wolf Creek Ranch, a 13,000 plus acre ranch community in north-east Utah. Nearly 50% of the ranch is pure aspen forest; the remainder is primarily grass, sage, and mountain shrubs. The ranch is home to a large, and previously protected, herd of elk and a favorite calving area in the spring.

That same year I noticed some of our aspen forests didn't look as healthy as others so I put a team of ecologically minded ranch owners together and asked an esteemed group of aspen scientists to evaluate the health of our aspen. A pilot study revealed that we did have a problem: a high percentage of browse damage and too few recruitment stems. In 2012, our team of citizen scientists counted aspen transects in 50 random sites across the ranch and determined that nearly half of our aspen forests were suffering from an unsustainable percentage of aspen browse and paucity of recruitment: the next generation of aspen forest. Pellet counts suggested that the cause of our problem was the large number and limited movement of elk.

Historically, our ranch was a hunting ranch, but from 1997-2012, hunting was prohibited. During those 15 years, the hunting pressure from the adjacent national forest and neighboring ranches pushed even

Western Aspen Alliance

TREMBLINGS

NEWSLETTER & BULLETIN BOARD

Vol. 8(2), May 2017

more elk into our aspen forests. In addition, mild winters and abundant forage helped the elk population in Utah, and specifically our Wasatch Unit, increase in number. Large pure aspen forests, a large elk herd, and no predation were the perfect storm for an unsustainable elk browse on our regenerating aspen stems.

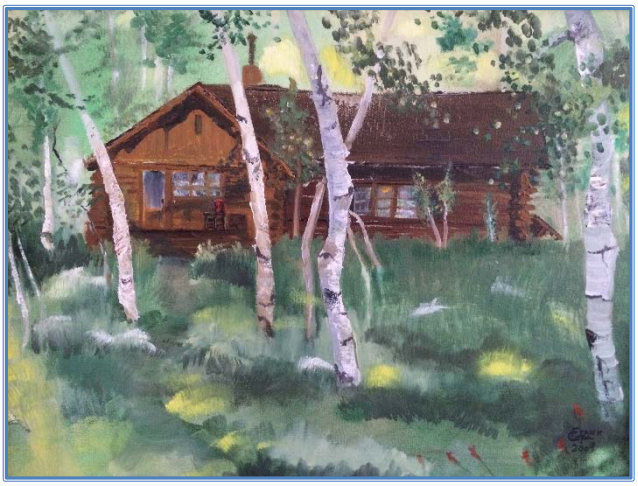
We received a grant to place fence exclosures around some of our most at risk aspen forests. As one might expect, the aspen stems and understory inside the fence responded beautifully while the land outside the fence, not so much. These fences acted as a great example for our owners to see firsthand just how well an aspen forest can respond by reducing the number mouths eating within them.

The data was clear and the answer to the problem even clearer; however, not all owners could accept the idea of allowing elk to be hunted on our ranch despite the need to protect our aspen forests. It took a lot of owner education by our scientist partners, especially those who were non-hunters, to convince our owners that a change in elk behavior was necessary, and (barring predator reintroduction) hunting was the most efficient way to do it. Since 2012, our limited cow elk hunt has reduced elk herd growth, and has reduced browse damage within our aspen forests. The change in elk behavior is noticeable. Adding hunting into the equation may give our aspen forests the needed help to thrive again.

Identifying the problem and determining the cause of and solution for the problem entailed collaboration between citizen scientists and researchers. This partnership remains strong and is an example for other large private land owners who desire to preserve and protect their valuable resources. My role as citizen scientist continues to grow and change the lens with which I see both the forest and the trees.

WAA *Creates*

"WAA Creates" showcases creative aspen-related contributions. We encourage fiction, folklore, poetry, drawings, paintings, photography, and other artistic expressions that may be captured in a brief-form newsletter. Please contact the Director with suggestions or feedback on this feature.



Cabin in Aspen
(oil on canvas)

Frank Cope, Cortez, Colorado

This painting was completed in 2011 at the Aspen Guard Station near Mancos, Colorado, on the San Juan National Forest while Frank Cope was an Artist in Residence.

RECENT ASPEN PUBLICATIONS

Boča, A., and H. Van Miegroet. 2017. Can Carbon Fluxes Explain Differences in Soil Organic Carbon Storage under Aspen and Conifer Forest Overstories? Forests 8:118.

Cadieux, P., and P. Drapeau. 2017. Are old boreal forests a safe bet for the conservation of the avifauna associated with decayed wood in eastern Canada? Forest Ecology and Management 385:127-139.

Conway, A. J., and J. F. Johnstone. 2017. Moose alter the rate but not the trajectory of forest canopy succession after low and high severity fire in Alaska. Forest Ecology and Management 391:154-163.

Decker, V. H., F. Bandau, M. J. Gundale, C. T. Cole, and B. R. Albrectsen. 2017. Aspen phenylpropanoid genes' expression levels correlate with genets' tannin richness and vary both in responses to soil nitrogen and

associations with phenolic profiles. Tree Physiology 37:270-279.

Greer, B. T. 2017. Differences in Evolutionary History and Ploidy Type Shape the Interactions of Populus tremuloides Michx. with Climate. Oregon State University, Corvallis, Oregon. [Dissertation].

Kuuluvainen, T., A. Hofgaard, T. Aakala, and B. G. Jonsson. 2017. North Fennoscandian mountain forests: History, composition, disturbance dynamics and the unpredictable future. Forest Ecology and Management 385:140-149.

Laganière, J., A. Boča, H. Van Miegroet, and D. Paré. 2017. A Tree Species Effect on Soil That Is Consistent Across the Species' Range: The Case of Aspen and Soil Carbon in North America. Forests 8:113.

Rogers, P. C. 2017. Guide to Quaking Aspen Ecology and Management. USDI, Bureau of Land Management, Salt Lake City, Utah, BLM-UT-G1017-001-8000. 98 p.

Stockdale, C. A. 2017. A century of landscape change in the southern Rocky Mountains and foothills of Alberta: Using historical photography to quantify ecological change. University of Alberta, Edmonton, Alberta. [Dissertation].

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