



TREMBLINGS

NEWSLETTER & BULLETIN BOARD

Vol. 9(3), August 2018

“...partnering to preserve and restore healthy aspen ecosystems.”

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

WAA HAPPENINGS

Forest Scientist Position Open—Utah State University’s Wildland Resources Department is advertising a tenure-track position in silviculture and applied forest ecology. For more information, check out the complete [job advertisement](#). Application review will begin September 10, 2018.

Send Your Flashy Photos—We’d like to post your best aspen photos on the WAA Facebook site. [Send us](#) pictures that are artistic, unique, ridiculous, or sublime. We’ve toyed with flash fiction—three to five sentence stories—with some of the quirkiest aspen photos on Facebook, too. The responses have been creative, thought provoking, and fun, so be sure to let us know if you’d like to see others convert your photo to a mini-tale!

Partnering with Beaver-Wetland Ecologists—The WAA is initiating a new partnership with Utah State University’s Fluvial Habitats Center (FHC) to examine aspen-beaver linkages and restoration practices. Symbiotic relations between these keystone species holds great promise for restoring natural processes, as well as understanding basic ecological principles. See Stephen Bennett’s Commentary (p. 2) for further context about this exciting new venture.

Donate to the WAA—Due to changes in circumstances at the WAA we need direct member support. Like public broadcasting, we’re requesting user-appropriate contribution levels. If you value



Up close and personal, aspen bark shows remarkable complexity of textures and patterns. Here, the photographer’s lens captures the nuance of a decaying stem and sloughing bark within the giant Pando aspen clone near Fish Lake, Utah (Photo: Lance Oditt, Studio 47.60 North).

services provided by the WAA, please consider [donating online](#) at a level that fits your budget. Thanks!

Featured Artist Contributes to WAA—Artist Nancy Romanovsky (See *WAA Creates*) will donate 15% of sales proceeds from her aspen-themed paintings through September, 2018. You may visit her [offerings online](#) and browse her catalog of aspen works. Simply indicate you are a WAA member if you decide to purchase a painting.



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UPCOMING EVENTS

‘Multiple Use’ Meets Collaboration—The focus of the 12th Annual [Restoring the West Conference](#) on October 16-17, 2018 will be overcoming land management and restoration challenges to achieve sustained yield of multiple uses on public lands. Researchers and managers will meet at Utah State University to address compromises, collaborations, and creative solutions that can improve restoration of public lands for sustained yield of multiple resources.

Aspen Workshops & Gatherings 2018—

- **Utah:** This year’s Pilgrimage to Pando is a follow-up to 2017’s Road Trip to Pando. Dates have been set (Sept. 6-9) and logistics are being finalized. The Pilgrimage will take on a decidedly spiritual-environmental perspective with speakers from numerous faith groups standing alongside scientists, artists, and designers. Check the [Pando Populus](#) website for further developments.
- **Nevada:** Previously announced plans for a Nevada workshop have been delayed to 2019. Stay tuned, Nevada aspen enthusiasts!
- **Propose a Workshop:** Contact the [WAA Director](#) to schedule a workshop on public, private, or combined ownership lands.

COMMENTARY

Beaver are coming for your aspen – are you ready?

Stephen Bennett, Researcher Lead, Fluvial Habitats Center, Utah State University, Logan, Utah



Regulations and management of riparian corridors has improved greatly over the last few decades, but there remains a deficit of *structure* such as beaver dams and woody debris (e.g., logjams). Beaver dams and accumulations of wood alter the stream flow and create more

complex stream habitats. Beaver populations were decimated in the 1800’s as trappers and settlers spread across western North America. Continued settlement and development left many streams without beavers (and the dams they build) and greatly reduced wood in streams. As a result, the form of many streams changed from multiple channels with diverse instream habitats and well connected floodplains to narrow incised channels, with low habitat diversity, and decreased ability to store sediment. These conditions still exist across the West and have likely reduced the extent of riparian areas and aspen communities dependent on mesic conditions.

The value of beavers as stream “engineers” is now well recognized. Beaver dams slow stream flow, which increases groundwater recharge, widens riparian areas, sorts and stores sediment, and, because dams constantly fail and are rebuilt in new areas, create a diversity of habitats that sustain native fishes, amphibians, and bird species (photo below). These benefits are emboldening managers to use beaver as a stream



restoration tool. Often nuisance beaver are translocated to degraded streams to increase habitat diversity and regular inundation of the floodplain. However, translocation is still relatively rare compared to other expensive engineering approaches. There are many reasons why the use of beavers to restore streams is still relatively small scale – fear of unintended consequences, negative perceptions of beavers, and agencies anxiety regarding translocations.



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Another restoration method growing in popularity is the use of beaver dam analogs (BDA) which are simple hand-built structures used to simulate a beaver dam, create a pond, and promote floodplain connection. A BDA is often built by driving wooden fence posts into the stream in a perpendicular picket, weaving woody vegetation between the posts, and piling mud and rocks on the upstream side of the BDA (photos here: construction/complete). In small



streams, BDAs can be built without posts. BDAs can also be used to improve translocation success by providing a pond for beaver, which can limit exposure to predators before the beaver build their own dams.

Why should aspen researchers and managers care about all this “beaver fever”? Well, beaver really love aspen. Beaver may travel at least 100 m from a stream or lake to harvest aspen, often passing other suitable vegetation. As beaver translocations increase, they will affect aspen communities—that’s what beaver do. However, research also shows that beaver stimulate aspen growth, while some clones will develop chemical defenses to herbivory that ultimately adds to forest diversity. Additionally, increased floodplain connection will likely expand aspen habitat while simultaneously establishing patterns of dynamic, continuous, regrowth. This symbiotic relationship between two keystone species—beaver and aspen—has been absent for over 150 years in many streams. There’s little doubt that the net ecological benefit of beaver translocations will be positive, but each translocation will have its own unique set of complications and challenges as we try to

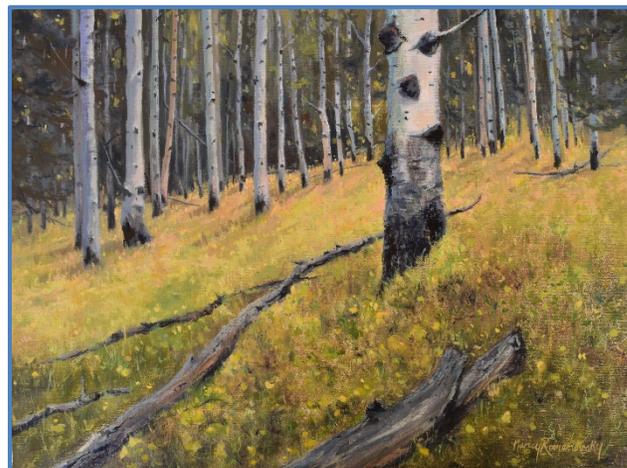
recreate resilience and diversity in streams and aspen communities—one beaver at a time.

WAA Creates

“WAA Creates” showcases artistic 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, submissions, or feedback on this feature.

Aspen Slope

(12 x 16 oil on linen)



Nancy Romanovsky
Flagstaff, Arizona

The artist: *Aspens are a key theme in my work, each individual tree is unique yet part of single clone, a brotherhood. Aspen Slope was inspired by the stand at Lockett Meadow near Flagstaff, Arizona. The beautiful confetti-like carpet of leaves along the sloping meadow caught my eye.*

RECENT ASPEN PUBLICATIONS

Arnold, J., M. S. Gustin, and P. J. Weisberg. 2018. Evidence for Nonstomatal Uptake of Hg by Aspen and Translocation of Hg from Foliage to Tree Rings in Austrian Pine. *Environmental science & technology* 52:1174-1182.



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- Shay, P.-E., C. P. Constabel, and J. Trofymow. 2018. Evidence for the role and fate of water-insoluble condensed tannins in the short-term reduction of carbon loss during litter decay. *Biogeochemistry* 137:127-141.
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