# TREMBLINGS

## NEWSLETTER & BULLETIN BOARD

*Vol. 8(3), August 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 Field Guide Available—**Hardcopy spiral-bound editions of the new field guide entitled, "Guide to Quaking Aspen Ecology and Management," by WAA Director Paul Rogers, will be available after August 10. This field guide applies recent advances in aspen science for professional use. Order by emailing Thomas Adamson, typing "Aspen Field Guide" in the subject line, and clearly indicating your mailing address.

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

**Aspen Artwork Requested—***Tremblings* wants to show off your art: brief stories, poems, paintings, photography, or other original works. Contact the WAA Director if you have interest in showing us your creative aspen ideas and items. See the "WAA Creates" section at the end of this or previous *Tremblings* for examples.

**Pando Media Report**—The 106-acre (43 ha) Pando aspen clone continues to make news internationally. An article is expected in *Discover* magazine this fall, *Süddeutsche Zeitung Magazin* (Munich, Germany) very soon, and a Canadian documentary film is in final production.

**WAA Goes International**—Western Aspen Alliance Director Paul Rogers, has been awarded a Fulbright Specialist position for five weeks in the Czech Republic. In addition to teaching biogeography, aspen ecology, and monitoring methods, Paul will be coordinating with aspen researchers around the northern hemisphere to examine circumboreal conservation issues related to these forests.

*Aspen provide habitat in varied ways. This large black canker provides footing for avian nesting in northern Utah. (Photo: Jim Shuler, Wolf Creek Ranch, Utah).*

## UPCOMING EVENTS

**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, local case studies, and extensive field discussions. Further information is

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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 holding a Special Session entitled "Bringing Science and Management Together to Restore Resilient Aspen Forests." If you are planning to attend, look for this session or contact facilitator Katie Ireland, Department of Ecology, Montana State University.

**Road Trip to Pando**—The upstart group Pando Populus is out "to rethink civilization with the Earth in mind." If that's not bold enough, they will be hosting a Road Trip to Pando, Sept. 21-24, 2017. Based in Los Angeles, they will bring a tour bus of philosophers, designers, ecologists, writers, and Think Wrong facilitators to listen, learn, and dialogue about Pando's future. Previous projects worked with such diverse groups as artists, gang members, programmers, writers, and faith leaders. Can laughing, learning, engaging, and problem-solving work at the Pando grove, too? We invite you to participate. Costs based on departure from Las Vegas. If traveling to Fish Lake independently, contact Amy Goldberg for pricing. Space limited.

## COMMENTARY

### Uphill Battle to Restore Aspen in the Sierra

**John-Pascal Berrill**, PhD - Forestry Faculty, Humboldt State University, California

Being a forest owner and manager, I'm interested in topics important to local forest managers: uneven-aged management and restoration. Maybe I just want the complete opposite of the plantation forestry back home in New Zealand. Moving to California satisfied that, with complex disturbance, social, and policy issues surrounding natural resource management of mixed stands. And with tree species that sucker and sprout – a challenge!

I've learned that we find most aspen in the Sierra Nevada Mountains isolated in small patches where there is access to soil moisture, surrounded by (often crowded) conifer stands on land too dry for aspen. Some of these aspen stands have lush diverse understory plant communities, home to insects and birds, but more common is to see an abundance of younger shade-tolerant conifers regenerating beneath the aspen, shading out the entire understory and impacting habitat values. No longer do I call this "conifer encroachment," because here we occasionally find ancient conifers much older than any individual aspen stem, so we can't say that aspen arrived first. It is likely that repeated wildfire helped aspen stay ahead of their conifer associates which are not fire-resistant when young. By reducing fire we have favored conifers in these aspen-conifer stands, so now restoration aims to redress the imbalance and prevent "succession to conifer".

Our research indicates that conifers—mostly red or white fir—will eventually overtop and replace the aging aspen overstory. This might not be such a concern if the pioneering aspen could migrate into newly cut or burned areas nearby, but such opportunities are lacking in most areas: home and cabin owners throughout the region are fearful of stand-replacing and mixed-severity fire, and heavy cutting is not widely practiced, especially in wetter

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areas where migrating aspen seedlings might establish by surviving the long dry climatically Mediterranean summer. So maintaining or restoring aspen where they currently reside seems necessary—but the ongoing battle removing conifers without using fire is time-consuming and expensive.

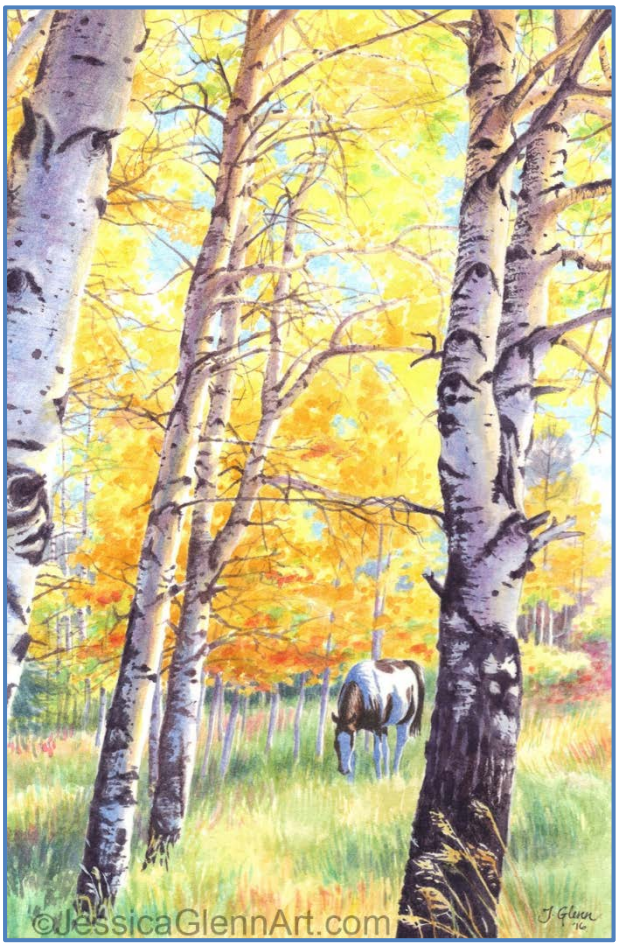
State and federal land managers reduce conifer densities and hazardous fuel loads as best they can, manually with chainsaws and pile burning to dispose of cut wood, or if they're lucky with mechanized harvesters in accessible areas. When conifer logs can be extracted and sold, then heavier cutting can be practiced and aspen regenerate prolifically (see Berrill et al. 2017, "Recent Aspen Publications"). Inaccessible stands likely need to be manually treated multiple times before aspen outnumber conifers (to prevent too much fuel on the ground at any one time).

The citizenry are engaged and generally recognize that our forests need treatment. There is also a sense of collaboration and trust among regulatory agencies and land management agencies staffed with thoughtful and passionate professionals. Especially satisfying is attending workshops and field tours and being part of the dialogue with representatives from many agencies and organizations, with diverse perspectives. Here the conversation always turns to the future—beyond the short-term conifer removal and fuels reduction efforts: "how can we expand the use of prescribed fire as a management tool?"

## 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, submissions, or feedback on this feature.*

**Alice Creek Aspen**
(watercolor)




**Jessica Allen, Dillon, Montana**

*Alice Creek is located near Lincoln, Montana. From the artist: "I was drawn to the simple beauty of this golden, roadside aspen stand while exploring Alice Creek on a gorgeous Montana autumn day."*

## RECENT ASPEN PUBLICATIONS

Alexander, H. D., and M. C. Mack. 2017. Gap regeneration within mature deciduous forests of Interior Alaska: Implications for future forest change. Forest Ecology and Management 396:35-43.

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Blodgett, J. T., K. K. Allen, K. Schotzko, and A. Dymerski. 2017. Aspen Health on National Forests in the Northern Rocky Mountain Region. USDA, Forest Service, Forest Health Protection, Golden, CO. 19 p.

Carter, V. A., A. Brunelle, T. A. Minckley, J. D. Shaw, R. J. DeRose, and S. Brewer. 2017. Climate variability and fire effects on quaking aspen in the central Rocky Mountains, USA. Journal of Biogeography 44:1280-1293.

Chen, L., J. G. Huang, S. A. Alam, L. Zhai, A. Dawson, K. J. Stadt, and P. G. Comeau. 2017. Drought causes reduced growth of trembling aspen in western Canada. Global change biology 23:2887–2902.

De Jager, N. R., J. J. Rohweder, B. R. Miranda, B. R. Sturtevant, T. J. Fox, and M. C. Romanski. 2017. Modelling moose–forest interactions under different predation scenarios at Isle Royale National Park, USA. Ecological Applications 27:1317-1337.

Dickey, C. P. K. 2017. States and Transitions in Aspen Dominated Ecosystems in Western Colorado. Colorado State University, Fort Collins, CO. [MS thesis] 86 p.

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Hammond, H. J., D. W. Langor, and J. R. Spence. 2017. Changes in saproxylic beetle (*Insecta: Coleoptera*) assemblages following wildfire and harvest in boreal Populus forests. Forest Ecology and Management 401:319-329.

Ibarra, J. T., M. Martin, K. L. Cockle, and K. Martin. 2017. Maintaining ecosystem resilience: functional responses of tree cavity nesters to logging in temperate forests of the Americas. Scientific Reports 7:4467. Open Access.

Rhodes, A. C., V. Anderson, and S. B. St Clair. 2017. Ungulate herbivory alters leaf functional traits and recruitment of regenerating aspen. Tree Physiology 37:402-413.

Rhodes, A. C., H. Y. Wan, and S. B. S. Clair. 2017. Herbivory impacts of elk, deer and cattle on aspen forest recruitment along gradients of stand composition, topography and climate. Forest Ecology and Management 397:39-47.

Swift, C. E., K. T. Vierling, A. T. Hudak, and L. A. Vierling. 2017. Relationships among Vegetation Structure, Canopy Composition, and Avian Richness Patterns across an Aspen-Conifer Forest Gradient. Canadian Journal of Remote Sensing 43:231-243.

Thompson, C., C. A. Mendoza, and K. J. Devito. 2017. Potential influence of climate change on ecosystems within the Boreal Plains of Alberta. Hydrological Processes 31:2110-2124.

Vande Hey, J. M. 2016. Bigtooth and quaking aspen propagation from roots versus seed. Tree Planters' Notes 59:30-33.

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