



# TREMBLING S

## NEWSLETTER & BULLETIN BOARD

Vol. 6(1), February 2015

*"...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 to Paul Rogers: [p.rogers@usu.edu](mailto:p.rogers@usu.edu). We encourage you to share *Tremblings* with your friends and colleagues. **New members welcome!**

[regeneration ecology](#) from your desk at your convenience. We welcome your suggestions for future webinar topics.

### WAA HAPPENINGS

**Aspen in the News**—The *Arizona Daily Sun* published a news article on Feb. 3 titled, "[Curbing those aspen munchies](#)" about research being implemented by Friends of Northern Arizona Forests (FoNAF) and Northern Arizona University. If you'd like to know more about browse-resistant aspen, FoNAF Project Coordinator Ralph Baierlein, recently sent a [year-end report](#) describing progress in these experiments. For links to many aspen-related media items visit the WAA website Media tab. Please send aspen news links to [Paul Rogers](#) from media outlets in your area.

**Pando Article Garners Prestigious Award**—The American Association for the Advancement of Science (AAAS) announced their 2014 Kavli winners for excellence in science journalism recently. "Devastated: The World's Largest Organism is in Utah — and It's Dying", by Matthew LaPlante and Paul Christiansen, won first place for the Small Newspaper division. See details and link to the article via the [AAAS website](#).

**Recent Aspen Webinars**—Utah State University Forestry Extension and the WAA have co-sponsored a series of aspen subject matter webinars over the past two years. The most recent presentation by Rick Lindroth and Sam St. Clair on **aspen chemical defenses** can be found [here](#). Check out archived presentations addressing [climate adaptation](#), [historical disturbance and resilience](#), and [aspen](#)



*Detail of ice on branch wound. These types of wounds often become infected by stem cankers which, in addition to increasing tree mortality, contribute to biotic and aesthetic diversity. Logan Canyon, Utah, USA, Winter 2014 (Photo: Paul Rogers).*

**Schedule an Event**—This is a good time of year to make arrangements for field workshops, aspen expertise/speakers, webinars, and tours (contact the [WAA Director](#) for additional information). If you would like to announce 2015 activities in *Tremblings* please contact us.

### UPCOMING EVENTS

**Wyoming Workshop**—Wyoming Game & Fish and WAA will be presenting the 4th "Aspen Days" August 10-11 at Pinedale, WY. There will be an evening presentation followed by a one-day field trip. The event will address aspen ecology, fire, climate, wildlife uses and impacts, and exurban interface issues. All are welcome. Contact [Eric Maichak](#) or [Jill Randall](#) for further information.



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**New Mexico Workshop**—A New Mexico aspen workshop will take place during late summer 2015 (dates TBD). We will review current science applicable to land management and contrast issues, impacts, and treatment options on public versus private lands. New Mexico BLM, Western Landowners Alliance, and WAA will host the workshop. Contact BLM Forestry Lead [Jeremy Kruger](#) for specifics.

**NAFEW 2015**—The [10th North American Forest Ecology Workshop](#): Sustainable Landscapes from Boreal to Tropical Ecosystems will take place June 14-18, 2015 in Veracruz, Mexico. **Deadline Extended: Abstracts are for oral presentations are due February 28, 2015.** Forest ecologists from around North America will share ideas, knowledge, experiences, and challenges on forest ecosystems of Canada, Mexico and the United States, from boreal, arid and semi-arid, to tropical environments. The backdrop of the 10th NAFEW will be the tropical and the mountain cloud forests of central and southeast Mexico. The program will include three days of oral and poster presentations, as well as one day of in-conference field trips.

### COMMENTARY

#### **An Interagency Approach to Aspen Management - Soda Hills Case Study**

**Shelli Mavor**, Fire Ecologist/Fuels Specialist/Noxious & Invasive Coordinator, Bureau of Land Management, Pocatello Field Office, Pocatello, Idaho.

**Channing Swan**, Forester, BLM, Pocatello Field Office.



Aspen are a transitional species in a large part of our Rocky Mountain conifer ecosystems. While we observe their transition stages across various landscapes, we enjoy

the immense diversity they provide. We describe how interagency coordination assisted in aspen retention, promoted resilience, and continues to delay succession.

Soda Hills is a small isolated range in southeastern Idaho. A beautiful place where vegetation types such as sagebrush-steppe, juniper, mountain mahogany, Douglas-fir, aspen, and limber pine intermix. The area serves as mule deer and elk winter range, forage for moose, hunting grounds for golden eagles, habitat for other wildlife, and grazing for livestock. Much of this range is administered by the Bureau of Land Management (BLM) in partnership with Idaho Fish and Game (IDFG) and the Shoshone-Bannock Tribes (Tribes).

Since 2008, the BLM, IDFG, and Tribes have been targeting treatments within aspen stands to improve their health. By implementing treatments we hope to recruit 1000 suckers/acre (2500 /ha) two years post treatment. This is consistent with [Kurzel et al. \(2007\)](#), who considered this benchmark to be self-replacing. Treatment methods include: (1) thinning Douglas-fir/aspen stands with a combination of commercial and non-commercial mechanical activity; (2) removing encroaching juniper; (3) prescribed fire (broadcast and/or pile burning); and (4) noxious weed control (chemical, mechanical, and biological).

By implementing these methods we have seen several areas respond positively. One east aspect unit, prior to treatment, contained 107 suckers/acre (267 /ha). After a post lop-scatter/spring broadcast burn, results skyrocketed to 4,613 suckers/acre (11,532 /ha) two years later and 1,299 suckers/acre (3,247 /ha) after four years. Other successes were seen on a north aspect unit where, prior to treatment, we identified 218 suckers/acre (545 /ha); two years later after the lop-scatter treatment we counted 1,452 suckers/acre (3,630 /ha). Density belts and tree density monitoring protocols were used to collect data in these stands; data should not be extracted beyond the stand of which it was collected due to variant aspen types within Soda Hills.

Several caveats should be considered with this project. First, success of actions cannot be based on treatment type alone. Seasonality and climatic



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influences may also play a large role in the stand rejuvenation. Second, between 2000 and 2011, limited grazing occurred in the uplands. After 2011, BLM, IDFG, the Tribes, and the livestock permittee contained grazing in other nearby valleys. This concerted effort removed livestock grazing pressures from the aspen uplands.

Successes did not come without setbacks. Units which received burning prescriptions expressed increases in thistle populations. BLM is currently managing these noxious weeds with herbicides and biological mechanisms.

As of 2014, the BLM Pocatello Field Office has treated approximately 600 acres (243 ha) of aspen in the Soda Hills. We continue to experiment with prescriptions to stimulate suckering, including using mechanized timber sales for light surface disturbance without fire and hand crews to remove conifer and overstory aspen taller than 15 feet (5.6 m). We will continue to monitor suckering, alter livestock grazing, and check for recruitment.

### RECENT ASPEN PUBLICATIONS

Bachmann, S., V. J. Lieffers, and S. M. Landhäusser. 2015. Forest floor protection during drilling pad construction promotes resprouting of aspen. *Ecological Engineering* **75**:9-15.

Bartels, S. F. and H. Y. Chen. 2015. Dynamics of epiphytic macrolichen abundance, diversity and composition in boreal forest. *Journal of Applied Ecology* **52**:181-189.

DeRose, J. R., K. E. Mock, and J. N. Long. 2015. Cytotype differences in radial increment provide novel insight into aspen reproductive ecology and stand dynamics. *Canadian Journal of Forest Research* **45**.

DeRose, R. J. and A. J. Leffler. 2014. Simulation of Quaking Aspen Potential Fire Behavior in Northern Utah, USA. *Forests* **5**:3241-3256.

Dhar, A., J. R. Wang, and C. D. Hawkins. 2015. Interaction of Trembling Aspen and Lodgepole Pine in a Young Sub-Boreal Mixedwood Stand in Central British Columbia. *Open Journal of Forestry* **5**:129.

Koumbi-Mounanga, T., K. Groves, B. Leblon, G. Zhou, and P. A. Cooper. 2015. Estimation of moisture content of trembling aspen (*Populus tremuloides* Michx.) strands by near infrared spectroscopy (NIRS). *European Journal of Wood and Wood Products* **73**:43-50.

Krasnow, K. D. and S. L. Stephens. 2015. Evolving paradigms of aspen ecology and management: impacts of stand condition and fire severity on vegetation dynamics. *Ecosphere* **6**:1-16.

Margolis, E. Q. and C. A. Farris. 2014. Quaking aspen regeneration following prescribed fire in Lassen Volcanic National Park, California, USA. *Fire Ecology* **10**:14-26.

Meier, G. A., J. F. Brown, R. J. Evelsizer, and J. E. Vogelmann. 2015. Phenology and climate relationships in aspen (*Populus tremuloides* Michx.) forest and woodland communities of southwestern Colorado. *Ecological Indicators* **48**:189-197.

Morley, P. J. and R. V. Taylor. 2014. Survivorship of shrubs and trees planted within exclosures on Pine Creek on the Zumwalt Prairie Preserve. *The Nature Conservancy, Enterprise, OR*. 11p.

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