



# TREMBLINGS

## NEWSLETTER & BULLETIN BOARD

Vol. 4(1), February 2013

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

**NOTICE:** The WAA is a user-driven organization. *Tremblings* will attempt to capture the greater aspen user group's wants and needs. 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!

### WAA HAPPENINGS

**Special Aspen Issue of FEM Coming Soon—***Forest Ecology and Management* will be publishing the WAA-hosted issue on Quaking Aspen this spring (St. Clair & Rogers, Guest Editors). Several articles are already published online [here](#) (search by author, keyword, or scroll through list). This Special Issue is the culmination of one WAA initiative to provide state-of-the-science reviews to managers and scientists on numerous aspen topics affecting long-term cover change and ungulate browsing. These topics were originally addressed at our "[Resilience in Quaking Aspen](#)" symposium held summer 2012. We will list papers individually in *Tremblings'* **RECENT ASPEN PUBLICATIONS** section as they are officially published in the coming months.

**In the News**—A interview examining the giant Pando aspen clone in central Utah was aired Feb. 1-8 on public radio stations in the United States. The program "Living on Earth" features Karen Mock and Paul Rogers (WAA/Utah State University) discussing genetic and management issues of Pando. Listen to the entire interview and see pictures by visiting the [WAA homepage](#) and clicking the Media tab.

**Volunteer Aspen Restoration in Arizona**—Friends of Northern Arizona Forests is growing aspen from root cuttings and replanting them in formerly aspen-dominated forests. After a large 1996 wildfire aspen regeneration, which was prolific, was subsequently

browsed by elk until no aspen remained. Volunteer efforts, guided by the US Forest Service, are attempting to restore these stands by transplanting greenhouse suckers to wildland locations. This multi-year project is documented in an [annual report](#).



*Winter tracks of the snowshoe hare (*Lepus americanus*) bisect an aspen-subalpine fir (*Abies lasiocarpa*) forest near the Utah-Idaho border. (Photo: Paul C. Rogers).*

**Forest Ecology Faculty Position**—Utah State University will be hiring a new Assistant Professor in Forest Ecology. A detailed job description can be found at USU's [Wildland Resources website](#). Applicant reviews will begin February 1, 2013.

**Elk Hunting for Aspen Restoration**—"For the second year in a row, the Arizona Game and Fish Commission has approved any-elk and antlerless



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[hunting] tags in the Peaks Hunt Area in Unit 7 East to promote successful aspen regeneration. Approximately 90 percent of all aspen found on the Coconino National Forest are found in this limited hunt area. Recent wildfires have killed some of the adult aspen trees, but have also stimulated extensive sprouting of young aspen that elk prefer to eat, especially during the fall. Wildlife biologists believe that by focusing elk management in this area now, chances will increase for robust aspen regeneration." [Contact AZGFD](#) for a complete copy of the press release or further details.

### UPCOMING EVENTS

**Aspen Session at NAFEW**—The 9th North American Forest Ecology Workshop (<http://nafew.org/>) will be held June 16–20, 2013 in Bloomington, Indiana. **A special session titled, "Applied Aspen Biogeography" has been added. The session will be hosted by Paul Rogers, Francine Tremblay, and Yves Bergeron.** The conference allows forest ecologists, silviculturists, wildlife biologists, and other forest researchers and managers from Canada, Mexico, Central America, and the United States to gather and exchange current research and management approaches within the backdrop of the US central hardwood forests.

**Deer & Elk Workshop**—The Western State and Provinces Deer & Elk Workshop will be held May 6-9 in Missoula, Montana. Numerous issues have arisen in recent years involving both deer and elk pertaining to aspen habitat, herbivory, sustainable populations, and watershed/stream protection. This notice is particularly for wildlife and land managers, but may be of interest to other conservation groups, wildlife advocates, citizens, and scientists. Find details about the workshop at [this link](#).

### COMMENTARY

#### **Thank Goodness for 'Rocks and Ice'**

**Gregory H. Aplet**, Senior Forest Scientist,  
The Wilderness Society, Denver, Colorado



Much has been made in recent *Tremblings* Commentaries about the sustainability of aspen and aspen ecosystems in the face of multiple threats. Authors have lamented regeneration failure, aspen dieback, disruption of

disturbance regimes and riparian processes, and other woes.

One of the major concerns affecting the sustainability of aspen is the reduction of fire in western landscapes. Despite recent changes in policy, there remains tremendous pressure to discourage fire, especially the large, severe fires that stimulate aspen regeneration. To achieve the benefits of fire without the risk, managers have turned to silvicultural treatments to encourage suckering, but the limited scale of treatments has left regeneration exposed to the threat of ungulate herbivory. Whether native or non-native, high population levels of mammalian herbivores are interacting with altered disturbance patterns such that browsers are now able to find and eliminate regeneration within the small openings created through silviculture and limited fire.

If disturbances are large enough, though, it may be possible for regeneration to escape herbivory long enough to grow out of reach simply by overwhelming the ability of herbivores to find and eliminate suckers. The problem is that there are precious few places where wildfires are allowed to reach their potential anymore. Despite recent, highly publicized "mega-fires," area burned in the western U.S. remains well below historical norms.

One of the few places in which large fires may burn unimpeded is wilderness, where policy encourages



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the free play of natural processes. Since 1995, federal policy has recognized fire as an important natural process and sought to encourage it where safe to do so, and recent policy shifts have made it even easier to use fire for resource benefit, especially in wilderness. Wilderness has become the safe haven of fire and, through its regenerative effects, the safe haven of aspen as well.

Recently however, the decline of aspen has been linked to long-term changes in climate, changes that threaten wilderness as much as any other land class. The range of aspen is expected to shift northward in latitude and upward in elevation. As a result, a greater share of aspen's range is likely to occur in wilderness, which is concentrated at higher elevations—in the long-disparaged “rocks and ice” that dominate the National Wilderness Preservation System. In Montana, a quick analysis by researchers from The Wilderness Society suggests a doubling both of the amount of aspen in wilderness and the proportion of its range in wilderness by 2060.

As climate change unfolds, we may find ourselves very grateful that we protected so much high-elevation land, where large, natural disturbances may be allowed to play out even as aspen expands its range. To fulfill the potential of that conservation legacy, though, we'll need also to connect wilderness across gradients of latitude and elevation to ensure connectivity of disturbance regimes as well as connectivity of populations as the climate changes. Aspen's future may depend on it!

### RECENT ASPEN PUBLICATIONS

Anderegg, W. L., L. D. L. Anderegg, C. Sherman, and D. S. Karp. 2012. Effects of Widespread Drought-Induced Aspen Mortality on Understory Plants. *Conservation Biology* **26**:1082–1090.

Fedrowitz, K., M. Kuusinen, and T. Snäll. 2012. Metapopulation dynamics and future persistence of epiphytic cyanolichens in a European boreal forest ecosystem. *Journal of Applied Ecology* **49**:493-502.

Gustafsson, L., K. Fedrowitz, and P. Hazell. 2013. Survival and vitality of a macrolichen 14 years after transplantation on aspen trees retained at clearcutting. *Forest Ecology and Management* **291**:436-441.

Jung, K. and S. X. Chang. 2013. Soil and tree chemistry reflected the cumulative impact of acid deposition in *Pinus banksiana* and *Populus tremuloides* stands in the Athabasca oil sands region in western Canada. *Ecological Indicators* **25**:35-44.

Jung, K., W. J. Choi, S. X. Chang, and M. Arshad. 2013. Soil and tree ring chemistry of *Pinus banksiana* and *Populus tremuloides* stands as indicators of changes in atmospheric environments in the oil sands region of Alberta, Canada. *Ecological Indicators* **25**:256-265.

Krasnow, K. D., A. S. Halford, and S. L. Stephens. 2012. Aspen restoration in the eastern Sierra Nevada: effectiveness of prescribed fire and conifer removal. *Fire Ecology* **8**:104-118.

Long, J. N. and K. Mock. 2012. Changing perspectives on regeneration ecology and genetic diversity in western quaking aspen: implications for silviculture. *Canadian Journal of Forest Research* **42**:2011-2021.

Morris, J. L., A. Brunelle, J. R. DeRose, H. Seppä, M. J. Power, V. Carter, and R. Bares. 2013. Using fire regimes to delineate zones in a high-resolution lake sediment record from the western United States. *Quaternary Research* **79**:24-36.

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