



# TREMBLINGS

## NEWSLETTER & BULLETIN BOARD

Vol. 3(2), May 2012

*"...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!

You may access the database via the WAA website by clicking "Search Aspen Literature."

**Aspen Webinar Available Online**—For those that missed the February webinar addressing Aspen Ecology and Management, you may now link to presentations from the WAA website homepage here: <http://www.western-aspen-alliance.org/>. Key discussion items were aspen functional types, ungulate herbivory, and BLM management in aspen forests.

### WAA HAPPENINGS

**WAA Launches Online Forum**—In order to better serve the WAA community with relevant discussion of current issues, we have created a new online Forum (see WAA website). Our intent is to air your perspectives and to, hopefully, advance our collective understanding on aspen issues more broadly. Check out existing topics or add an aspen discussion item yourself. We will run this feature on a trial basis, so tell us what you think; does it help or hinder, inform or clutter your knowledge?

**Riparian Aspen Restoration Report**—The California Rangeland Watershed Laboratory has just released its final report on conifer removal/aspen restoration in northern Sierra Nevada riparian zones. They found no major negative effects of mechanical conifer removal while promoting increased aspen habitat. The full report is found at: [http://rangelandwatersheds.ucdavis.edu/main/Aspen%20Restoration/aspen\\_stands\\_project\\_1.html](http://rangelandwatersheds.ucdavis.edu/main/Aspen%20Restoration/aspen_stands_project_1.html).

**Aspen Bibliography Adds Unique Collection**—Utah State University's Quinney Natural Resource Library recently completed entry and scanning of over 300 historic, rare, unpublished, and government documents from Dr. Dale Bartos' personal library. To our knowledge, the Aspen Bibliography is the largest subject area digital database in the world with 7,162 records to date.



*Microflora of aspen. The lichen Xanthomendoza montana is shown on a roughened bark scar where moisture accumulates. Epiphytic lichens are useful indicators of biodiversity, successional status, and air quality (Photo scale = ~3x5 cm: Paul Rogers, Book Cliffs, Utah, USA).*

**Wallow Fire Aspen Recovery**—U.S. Forest Service, Arizona Fish & Game, and the WAA are meeting May 8-9 to formulate a monitoring strategy



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and embark on a field trip to discuss wildfire recovery for aspen in eastern Arizona. Aspen habitat has recently been declared an "ecological indicator" on the Apache-Sitgreaves National Forest.

### UPCOMING EVENTS

**"Aspen Days" in Jackson, Wyoming**—The US Forest Service, Teton Science School, Wyoming Game & Fish, and WAA are cosponsoring a week of aspen-related activities in western Wyoming July 24-27. Events will include 1970s era plot remeasurements, field workshops, and an evening of public presentations addressing local, regional, and national aspen topics. Dale Bartos, Paul Rogers, and other area experts will be speaking and participating in these activities. For further information contact Steve Kilpatrick:

[stevekilpatrick@wyomingwildlife.org](mailto:stevekilpatrick@wyomingwildlife.org)

**Aspen Restoration Activities in Arizona**—The volunteer-based Friends of Northern Arizona Forests will be hosting several work projects in the coming field season. Two initiatives are underway: constructing exclosures to protect regeneration from browsing and growing transplanted root stock for browse resistant aspen experimentation. Those interested in these activities may find more at: [www.friendsofnazforests.org](http://www.friendsofnazforests.org).

**WAA Science Advisory Panel Retreat**—A small gathering hosted by WAA's SAP will meet in western Colorado June 27-29 to explore the status of aspen research and key science needs among management agencies and private landowners. We hope to publish several review papers resulting from this meeting on different aspects of aspen sciences. The group also intends to lay groundwork for a 2013 workshop open to the entire WAA membership. Please send suggested research topics affecting your area to Paul Rogers ([p.rogers@usu.edu](mailto:p.rogers@usu.edu)).

### COMMENTARY

#### **Thinking like a clone: a case for biodiversity**

**Paul C. Rogers**, Director, Western Aspen Alliance & Adjunct Assistant Professor, Wildland Resources, Utah State University, Logan., Utah



Aldo Leopold famously asked us to consider 'Thinking Like a Mountain' in his essay of the same name from *A Sand County Almanac* (1949; [full essay](#)). While many are familiar with these sentiments, it seems that we haven't fully employed them in our land management practices, particularly where multiple stewards clash over shared resources. Across North America's forests, quaking aspen play a disproportionate role as oases of biodiversity, though our extractive activities by-and-large have not reflected this critical function. As we move forward, let us consider thinking like an aspen clone; or perhaps, a more complex community of many clones.

Though aspen have many values, they have traditionally followed higher priority softwood timber, range, water, and recreational uses—often to the detriment of aspen. After all, it wasn't long ago that many US National Forests actively reduced aspen cover to promote more desirable species, such as Ponderosa pine and Douglas-fir. Likewise, water diversion in the Sierra Nevada often disregarded riparian forests where aspen mostly occur. Aspen's use as "rangeland" has in many cases resulted in large-scale conversion of diverse terrestrial flora to a handful of native and exotic plants. Overall, heavy-handed management has taken its toll. Are we witnessing, in Leopold's words,



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the dying of "a fierce green fire" in the wolf's eyes in terms of aspen landscapes?

My experience tells me the answer is mixed, though loss of keystone species, such as wolves or aspen, have cascading consequences.

A few years ago I spent considerable time thinking about how large processes effect the diminutive, often overlooked, arboreal lichen flora of the mountains near my home in northern Utah. It turns out lichens can tell us a lot about processes, historical impacts, and future conditions. In short, lichens in Rocky Mountain aspen may be used to link successional change, as influenced by human activity, to their use as air quality gauges ([see article](#)). If we are losing aspen-dependent lichens because of human impacts, what other species are subtly dropping from these systems. This "indicator species" approach is only one example of underutilized value of aspen systems. What about avian communities, decomposers, macrofauna, and even pathogens? Cavity and secondary nesting birds are often highly dependent on aspen's thin bark and propensity for stem decay for lodging. As aspen cover declines or increases, so goes its dependent web of life.

Biodiversity, however, is more than a simple count of species. Complex aspen systems depend on restoration of key processes: predators indirectly influence plants, climate affects succession, disturbance imparts landscape complexity, and structural complexity invites species diversity. Cessation of vital processes has the opposite effect. Removing parts and processes decreases resilience.

In contrast to management where resources are treated as boundless, Scandinavian practitioners have elevated "biodiversity" to the highest use of their aspen (*Populus tremula*) forests. Red listed (essentially "threatened" species) epiphytes, such as macrolichens, are among the chief concerns in dwindling aspen

forests threatened by intensive logging, reduced natural disturbance, and overbrowsing by moose (*Alces alces*). If portions of this story sound familiar, perhaps sharing our collective experiences, as well as thinking like a clone, will impart a more resilient aspen future on western forests.

### RECENT ASPEN PUBLICATIONS

Angers, V.A.; Bergeron, Y.; Drapeau, P. 2012. Morphological attributes and snag classification of four North American boreal tree species: Relationships with time since death and wood density. *Forest Ecology and Management* 263: 138-147.

Anderegg, W.R.L. 2012. Complex aspen forest carbon and root dynamics during drought. *Climate Change* 111: 983-991.

Chaundy-Smart, R.F.C.; Smith, S.M.; Malcolm, J.R.; Bellocq, M.I. 2012. Comparison of moth communities following clear-cutting and wildfire disturbance in the southern boreal forest. *Forest Ecology and Management* 270: 273-281.

Hanna, P.; Kulakowski, D. 2012. The influence of climate on aspen dieback. *Forest Ecology and Management* 274: 91-98.

Lavoie, S.; Ruel, J.; Bergeron, Y.; Harvey, B.D. 2012. Windthrow after group and dispersed tree retention in eastern Canada. *Forest Ecology and Management* 269: 158-167.

Mittanck, C.M. 2012. Exploring a stable aspen niche within aspen-conifer forests of Utah. [MS Thesis] Utah State University, Logan, Utah. 131 p.

Newsome, T.A.; Heineman, J.L.; Linnell N.; Amanda F. 2012. Identifying and Characterizing Important Trembling Aspen Competitors with Juvenile Lodgepole Pine in Three South-Central British Columbia Ecosystems. *Intl. J. For. Res.* 12 p. [doi:10.1155/2012/573640].



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Ripple, W.J.; Beschta, R.L. 2012. Trophic cascades in Yellowstone: The first 15 years after wolf reintroduction. *Biol. Cons.* 145: 205-213.

Solarik, K.A.; Volney, W.J.A.; Lieffers, V.J.; Spence, J.R.; Hamann, A. 2012. Factors affecting white spruce and aspen survival after partial harvest. *J. Applied Ecol.* 49(1): 145-154.

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