Western Aspen Alliance

TREMBLINGS

NEWSLETTER & BULLETIN BOARD

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"…partnering to preserve and restore healthy aspen ecosystems in the West."

The WAA is a user-driven organization. *Tremblings* will attempt to capture the greater aspen user group's wants and needs. Please send suggestions, contributions, recent publications, and commentary to Paul Rogers (Hp.rogers@usu.eduH).

WAA HAPPENINGS

PRIFOR conference—The state of "Primeval Forests" of the northern hemisphere was the subject of an international conference held in Sundsvall, Sweden Aug. 9-13. Though aspen played only a minor part in this wide-ranging meeting, we were able to explore the possibility of forming an international alliance similar to WAA at an informally held evening session. Participants agreed to become members of the current organization, consider a future international aspen conference, and further explore how to organize (or not) as a scientific alliance.

US Forest Service Participating Agreement—Regions 1, 2, 3, and 4 of the US Forest Service have signed a Participating Agreement with the WAA to cooperate on management efforts, field excursions, conferences, and other activities related to knowledge sharing and transfer of recent aspen research. This long-sought agreement is expected to significantly enhance cooperative efforts between the signing parties.

UFRWG Guideline—Utah Forest Restoration Working Group is nearing completion of "Guidelines for aspen restoration on the National Forests in Utah." A wide range of stakeholders, via a collaborative process, is addressing the difficult problem of aspen management and restoration for US Forest Service lands in the state. The document is due out this fall. The goal of this project is, "…to incorporate the most current aspen science in a manner which allows the diverse interests represented here to move forward on a range of aspen-related restoration projects and issues affecting National Forests in Utah."

Science Advisory Panel—The WAA SAP met in early May to assess progress, approve future directions, and suggest new members. The group approved the addition of Cindy Swanson (USFS Research, Missoula) as a social scientist/economist for natural resource issues. Additionally, among many other items, the SAP has agreed to launch an expertise database via the WAA website. Efforts are underway currently for scientists and managers to voluntarily register their aspen skills with a view toward directing appropriate scientific knowledge to on-the-ground management needs. Samuel St. Clair is the SAP chairman; all members are shown on the website under the "Contacts" tab.

Paul Rogers at European aspen (P. tremula) *growing in a clearcut near Sundsvall, Sweden (August 2010). Aspen retention is a key strategy in maintaining biodiversity throughout Fennoscandia (Photo: Katja Fedrowitz).*

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UPCOMING EVENTS

Field trip to Pando clone—A one-day field trip sponsored by the Utah Forest Restoration Working Group will be held on Sept. 9 to the famed Pando clone on the Fishlake NF. This aspen clone, at 43 ha (106 acres), is purported to be the largest living organism on the planet. Participants will be discussing management options for ungulate herbivory, regeneration success, clonal dynamics, insects/disease/drought events. The trip will include visits to other aspen sites in the area.

Mountain Pine Beetle and aspen dynamics—Join Colorado Forest Restoration Institute, the National Park Service, and the U.S. Forest Service on Oct. 7 to look at the amount, location, and type of aspen regeneration in post-MPB stands, plus related interactions with herbivores. The tour will begin at 9 a.m. at Kawuneeche Vistor's Center in Rocky Mountain National Park. Contact Amanda Bucknam (amanda.bucknam@colostate.edu) for more information on this event.

Restoring the West, 2010—Dates are set and speakers are nearly finalized for this year's topic, "Managing Plant and Animal Conflicts." The conference will take place Oct. 26-27 on the Utah State University campus. Themes include large herbivore relations to aspen; sage grouse and sagebrush conditions; and habitat health and wildlife management for beaver, lynx, martin, and other species of the Interior West. Further details can be found at: http://restoringthewest.org/.

COMMENTARY

Tracking contemporary aspen sciences: a critical endeavor for land managers

Ron Ryel *is an Associate Professor of Plant Ecology in the Wildland Resources Department at Utah State University, Logan, Utah.*

"We know everything there is to know about aspen" has been a long-held and common opinion in the western aspen world. However, we are rapidly learning this is not true, and that management based on some of these opinions may not be appropriate or helpful in restoring or maintaining aspen. New knowledge and perspectives on aspen ecology and management may have profound effects on the future of aspen on western landscapes.

Among important new perspectives is that aspen stands on western landscapes are not all the same. Conventional thinking has looked at aspen as largely successional to conifer communities (seral aspen), and that disturbance of conifer communities (often fire) is necessary to maintain aspen stands. However, it is evident that many stands are not successional to conifer, and that conifer may not really be a component of many aspen stands (pure aspen). Apparently, these stands do not require catastrophic disturbance (e.g., fire) for regeneration and may in fact be driven by low-level, continuous, regeneration. Robust pure (or nearly so) aspen stands are comprised of mixed tree ages, where younger trees in the understory replace older trees when they die. There is also increasing evidence of relatively stable mixed stands of

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aspen (mixed aspen) and conifer, which like pure aspen, do not require intense disturbance to maintain the mixed stand structure.

The importance of distinguishing aspen types comes in the differences in management that may be suitable for sustainability. Lack of stand-level disturbance (largely fire suppression) has possibly reduced the vigor of aspen in seral stands and suggests fire may be necessary to maintain the successional dynamic between aspen and conifer. In contrast, pure stands may have limited regeneration and single- instead of multiple-age trees. The lack of regeneration (from domestic and wild ungulate browsing on young sprouts) results in a single, old age cohort that eventually dies. Stands in some areas have been manipulated with whole stand disturbances to enhance regeneration (e.g., fire or cutting), but despite often thousands of small sprouts following the disturbance, the regeneration is rapidly lost to ungulate browsing. Thus, the use of stand replacing disturbances appropriate for seral stands has resulted in complete loss of aspen cover in some areas where heavy browsing removed regeneration. Appropriate regeneration of pure stands may be tied to reestablishing mixed-age structure through selective removal in combination with browsing control. Dynamics of mixed aspen and conifer stands are less understood and further study is likely needed before effective management approaches can be developed for this type.

A sampling of new information also includes the following: 1) Single aspen stands may contain many distinct genetic individuals, not a single clone, and that stand sustainability may partially rely on trait diversity. 2) Aspen stands may be more susceptible to drought when most trees are old. 3) Factors such as early snow melt (enhanced by dust deposition or climate variability) may cause aspen to produce leaves earlier in the spring, depleting water resources before fall leaf drop. 4) Early leaf production can result in subsequent frost damage and affect nesting patterns of forest birds. These findings indicate the need for better information transfer to resource managers. The WAA strives to facilitate knowledge sharing toward the goal of sustainable aspen management.

RECENT PUBLICATIONS

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CONTACTS:

Paul Rogers, Director, Utah State University: p.rogers@usu.edu

Dale Bartos, Aspen Ecologist, Rocky Mountain Research Station: dbartos@fs.fed.us