Aspen workshop highlights
12-14 September 2017

2018 annual meeting, Alaska Society of American Foresters
(images taken by Glenn Juday, Tom Paragi, Sue Rodman, Roger Ruess)
2017 Alaska Aspen Workshop Summary

OCTOBER 24, 2017    •    FULL ARTICLE

The Cook Inlet Chapter of SAF along with the Alaska Northern Forest Cooperative hosted the Alaska Aspen Workshop starting in Fairbanks, Alaska September 12-14, 2017. Beginning with a series of lectures on aspen ecology, complemented with climate change, wildlife habitat, pathology, and entomology.
Why beautiful golden aspens drove Joe Vogler crazy

FAIRBANKS — As scientists gather in Fairbanks this week for a workshop on aspen trees — a misunderstood and often maligned species — the hillsides are cloaked in vibrant yellow. As the green vanishes and the birch and aspen leaves prepare to fall, one of the most striking things is how clearly defined clusters of aspen trees make the switch in unison. The timing is a function of an important subterranean system that connects what appear to be individual trees on the surface — one of the marvels of aspen trees.

Dermot Cole

Propagation from roots is common in aspen, constituting asexual reproduction,” Ronald Smith writes in a natural history of Interior Alaska. “New saplings sprouted in this manner are usually still connected by their root systems to the ‘parent’ tree.”

Aspen clones are genetically identical, and besides a root structure, they share many other traits, from the size of their leaves to the moment when green chlorophyll breaks down and the yellow remains.

“It is easy to see these clones on an Alaskan hillside in the fall when leaves are turning,” Smith writes in “Interior and Northern Alaska: A Natural History.”

“All the individuals in a clone have the same genetic information for timing the yellowing and loss of leaves.

“Nearby, unrelated clones often have slightly different genetic instructions for leaf yellowing. In September, you can see clumps of yellow adjacent to clumps of green or yellow-green leaves. Each clump represents a separate clone.”

A clone can cover an acre or up to 100 acres, the U.S. Forest Service says. A single grove may include multiple clones.

“A clone may turn color earlier or later in the fall or exhibit a different fall color variation than its neighboring aspen clones, thus providing a means to tell them apart,” the agency says.

Most of the people who live in this part of Alaska enjoy the clones and their colors, though I can’t write about this without mentioning the late Joe Vogler, a contrarian who always at war with the powers that be, including the powerful aspen. Vogler, founder of the Alaskan Independence Party, always said he wanted a “peaceful separation” for

See B2, C1
Presentations morning 12 Sept

- Paul Rogers, USU: Recent Advances in Aspen Sciences, Monitoring, and Management (plenary)


- Diane Wagner, UAF: Long-term outbreak of the aspen leaf miner in Alaska: consequences for aspen performance in a changing climate
Presentations morning 12 Sept

- Roger Ruess, UAF: *Overview of the Bonanza Creek Long-Term Ecological Research Program*

- Glenn Juday, UAF emeritus: *Aspen Growth Rate Collapse and Mortality from High Temperatures, Drought, and Insect Attack*

- Tom Paragi, ADF&G: *Management of Aspen Communities for Wildlife Habitat Benefits* (lunch)
How important are aspen stands to wildlife?

“At some time during their life cycle the aspens can provide the best quality cover and food resources for ruffed grouse at each stage of the bird’s annual life cycle. No other plant does this.” (Gullion 1984, p.3)
Wildlife species have different habitat needs met by seral features.

Early seral: stand initiation -- stem exclusion -- transition -- ”steady state”

Late seral:
Aspen communities: more than trees
Nenana Ridge afternoon 12 Sept
Nenana Ridge afternoon 12 Sept

May burning

Winter felling of aspen

Delta Junction afternoon 13 Sept

Dormant season dozer shearblading with debris windrows on gravel outwash plain; permanent plots to monitor stem density (2000-02, Delta Bison Range)
Delta Junction afternoon 13 Sept

Stocking and vigor related to crown health in adjacent forest (2017)
Creating age and structural diversity in a 21 year old aspen cohort regenerating from large recent burns near the road system (Delta Junction):

Smaller debris, faster treatment (lower cost/ac than shearblading mature trees)
Dinner presentation 13 Sept
(host: community of Tanacross)

- Cameron Carroll, ADF&G: *Grouse ecology and habitat management in the Tok area*
Hazardous fuel breaks near communities reduce risk of fire spreading and provide berries and game for food security.
Tok morning 14 Sept

2 growing seasons after roller chopping aspen in 1990 burn (2017)
more than one workshop, there are some states we haven’t been to: TX, NV, CA, OR, WA. To date there have been six workshops in WY; two ID, UT, NM, and one AK, AZ, CO, MT in these states. Contact the WAA Director if you have an idea for a field location or a local speaker.

Aspen Days 2018 Announces Site—The annual Wyoming Aspen Days series will be held in Laramie next summer. Details of dates, program, and participants are still being decided. If you’d like to host a field visit in this area or just attend the workshop, please contact Ryan Anundson, Habitat Biologist, Wyoming Game & Fish.

COMMENTARY

Aspen Regeneration for Wildlife in Alaska

Tom Paragi, Wildlife Biologist, Alaska Dept. Fish & Game, Fairbanks, Fairbanks
Sue Rodman, Wildlife Biologist, Alaska Dept. Fish & Game, Fairbanks, Anchorage

Where aspen reaches its northernmost distribution in North America, land and wildlife managers have taken creative steps in the absence of a fiber market to regenerate aspen for wildlife habitat in accessible sites near communities. Stable aspen communities exist on scattered south-facing bluffs, but most aspen occurs in seral communities facilitated by wildland fire.

A central goal is to provide winter forage for moose and a mosaic of stand age classes beneficial to forest grouse; both are hunted by residents and visitors. Additionally there is a growing importance of maintaining young aspen stands in strategic locations as hazardous fuel breaks in spruce-dominated forests where settlements can be at risk of wildland fire incursion.

Much of Alaska’s human population lives in forested landscapes. Fire management options have identified resources at risk (life, property, timber, etc.) since the 1980s and guided the allocation of suppression resources to minimize loss of resources. With increasing effectiveness of fire detection and suppression and little timber harvest, by the 1990s the amount of young forest near communities was declining.

The Alaska Department of Fish and Game partnered with the state Division of Forestry for a decade beginning in the 1990s on experiments to top kill dormant aspen and stimulate sprouting. Spring burns and felling with chainsaws occurred on south-facing loess sites, whereas shear blading with dozers was done on flat terrain (Fig 1). Debris jackstraws in mechanical treatments hindered public access and shaded soil, with lower sprouting density associated with colder soils in the rooting zone.

Sprouting objectives (12,500 stems/acre, 30,875/ha) were easily met in all sites, even with debris shading. Moose browsing evidence shows the degree of winter forage attraction. Treatment sites (5-45 acres/ 2-18 ha), even grouped in management areas (200-600 acres/ 80-240 ha), were too small to cause a measurable moose population increase, but they attracted local moose to road-accessible sites for fall hunting.

A change in fire regime is underway with the warming trend in climate. Alaska fires during 1969-2003 burned an average of 0.8 million acres (0.8 M ha) a year. In contrast, fires during 2004-2016 burned an average of 1.9 million acres (0.7 M ha), with a peak of 6.7 million acres (2.6 M ha) in 2016. Large burns occurred even near the road system in extreme years when suppression resources had to be prioritized, which has resulted in large even-age cohorts of aspen.

Habitat managers are utilizing these accessible seral patches by focusing efforts now on roller chopping and dozer crushing to create age class mosaics that optimize edge habitat and proximity.
Tok morning 14 Sept

Fuel breaks created with roller chopping near Red Fox road
Challenges of renewable resource management

- Adapting to simultaneous changes in the environment and societal desires over the career of manager

- Objectively informing stakeholders to engage thoughtful management and policy decisions

  - Continue monitoring succession in treatments intended to meet past goals
  - Monitor succession in treatments implemented for present goals
  - Establish treatments that anticipate future needs (validate modeling forecasts)
Co-production of knowledge to guide renewable resource outcomes

- Each stakeholder brings a “lens” for interpreting a given body of information relative to a desired outcome

- A degree of consensus among diverse stakeholders can build support for a management decision (more broadly a policy direction)

- The Alaska Northern Forest Cooperative was founded in 2003 as a forum of information exchange and discussion among managers, scientists, and forest landowners
Biomass and Small Tree Utilization
Wood Energy and Business Opportunities for Interior Alaska

Tentative Agenda
Tuesday, Sept. 27
Depart Fairbanks
Meet at 8 a.m. at the Division of Forestry parking lot, 3700 Airport Way.

Site Tours
Delta Junction – Pellet Plant
Dry Creek – Wood Fuel Power Generator for Sawmill
Dot Lake – Wood Heat Plant
Tok – Tanacross/Red Fox Fuel Treatment

Dinner
5:30 p.m: Fast Eddy’s (order from menu)

Evening Session
7:00 p.m: Tok Community Center
Welcome – Tok Chamber of Commerce and Workshop Organizing Committee

Northern Forestry Cooperative’s Role
Carol Lewis, Dean of School of Natural Resources & Agricultural Sciences, University of Alaska Fairbanks
Dean Brown – Acting State Forester, Alaska Division of Forestry
Andy Mason – Director of Alaska State and Private Forestry, USDA Forest Service

Wednesday, Sept. 28
Field Stops in the Tok area include:
Levels-of-Growing Stock Plantations
Taylor Highway Wildfire
Productive Black Spruce Stand on Sand Dune
Tok Wildfire (1991) Salvage, wildlife habitat, subsistence
Young’s Forest Products

Dinner/Evening Session
5:30 p.m., Tetlin Village Community Hall
Welcome – Danny Adams, Tetlin Landowner Interests/Support/Research Needs

Fall Workshop
September 27-29, 2005

Thursday, Sept. 29
Tok Community Center, 8:00 a.m.

Presentations and panels:

Wood Use Opportunities
Small Tree Utilization – Dan Parrent, Juneau Economic Development Council, Sitka, AK
Thermal – David Atkins, Fuels for Schools Program Manager, USDA Forest Service, Missoula, MT
Electrical – Todd Hoener (invited), Golden Valley Electrical Association, Fairbanks, AK
Cofiring Wood with Coal for Electrical Generation – David Nichols, PNW Research Station, USDA Forest Service, Sitka, AK
Ethanol – (speaker TBA)

The Business of Wood
Market Opportunities – Peter Crimp, Alaska Energy Authority, Anchorage, AK
Regulatory Considerations – Dennis Wheeler, Regulatory Commission of Alaska
Government Assistance – (invited), Denali Commission
Business Planning – Mike Miller, Small Business Development Center, Fairbanks, AK

Meeting Close-out (2:30 p.m.)

Sponsored by
Alaska Northern Forest Cooperative

For More Information contact:
Jim Kruse at 907-451-2701