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Each year wildfires burn over 7 million acres of western forests, more than the size of Deleware, Rhode Island and Connecticut combined

The treatment employed by Atlantis does not have the same side effects of fire, but produces faster aspen generation

This system clears growth above *and* below the ground, disrupting soil and stimulating rapid aspen regeneration


The results speak eloquently for themselves.


Conifers can consume up to 250 gallons of water per day under the right conditions.


Potentially, that is 60,833 gallons for a single tree per year that won’t reach the nearest pond or stream.

The added benefit of high elevation treatment is the production of new water.

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ECOSYSTEMS

Differential Snowpack Accumulation and Water Dynamics in Aspen and Conifer Communities: Implications for Water Yield and Ecosystem Function

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Abstract

Early succession aspen and late succession conifer forests have different architecture and physiology affecting hydrologic transfer processes. An evaluation of water pools and fluxes was used to determine differences in the hydrologic dynamics between stands of quaking aspen (*Populus tremuloides*) and associated stands of mixed conifer consisting of white fir (*Abies concolor*), Douglas-fir (*Pseudotsuga menziesii*), and Engelmann spruce (*Picea engelmannii*). In 2005 and 2006, measurements of snow water accumulation, snow ablation (melt), soil water content, snowpack sublimation, and evapotranspiration (ET) were measured in adjacent aspen and conifer stands. Peak snow water equivalent (SWE) averaged 34–44% higher in aspen in 2005 (average snow fall) and 2006 (above average snow fall), respectively, whereas snow ablation rates were greater in aspen stands (21 mm day^{-1}) compared to conifer stands (11 mm day^{-1}). When changes in soil water content (due to over-winter snowmelt) were combined with peak snow accumulation in 2006, aspen had greater potential (42–83%) water yield for runoff and groundwater recharge. Snowpack sublimation during the ablation period was not significantly different between meadow, aspen, and conifer sites and comprised less than 5% of the winter precipitation. Extended conifer transpiration in spring and fall did not contribute to large differences in water yield (<28 mm y^{-1}). Summertime ET rates were higher in aspen plots (3.6 mm day^{-1}) than in conifer plots (2.7 mm day^{-1}), and differences in net ET largely reflected soil column porosity. This study shows that the largest differences in annual water yield between aspen and conifer stands result from differences in SWE and net summertime ET. Although SWE and accumulation of water in soil was greater in aspen, it was partly offset by greater net annual ET losses in aspen.

Key words: quaking aspen; douglas-fir; white fir; subalpine fir; water balance; sap flux; snow water equivalent; evapotranspiration; sublimation; transpiration.

Introduction

Vegetation change affects ecosystem function and often alters resource values. One such change has been the decline of quaking aspen (*Populus*

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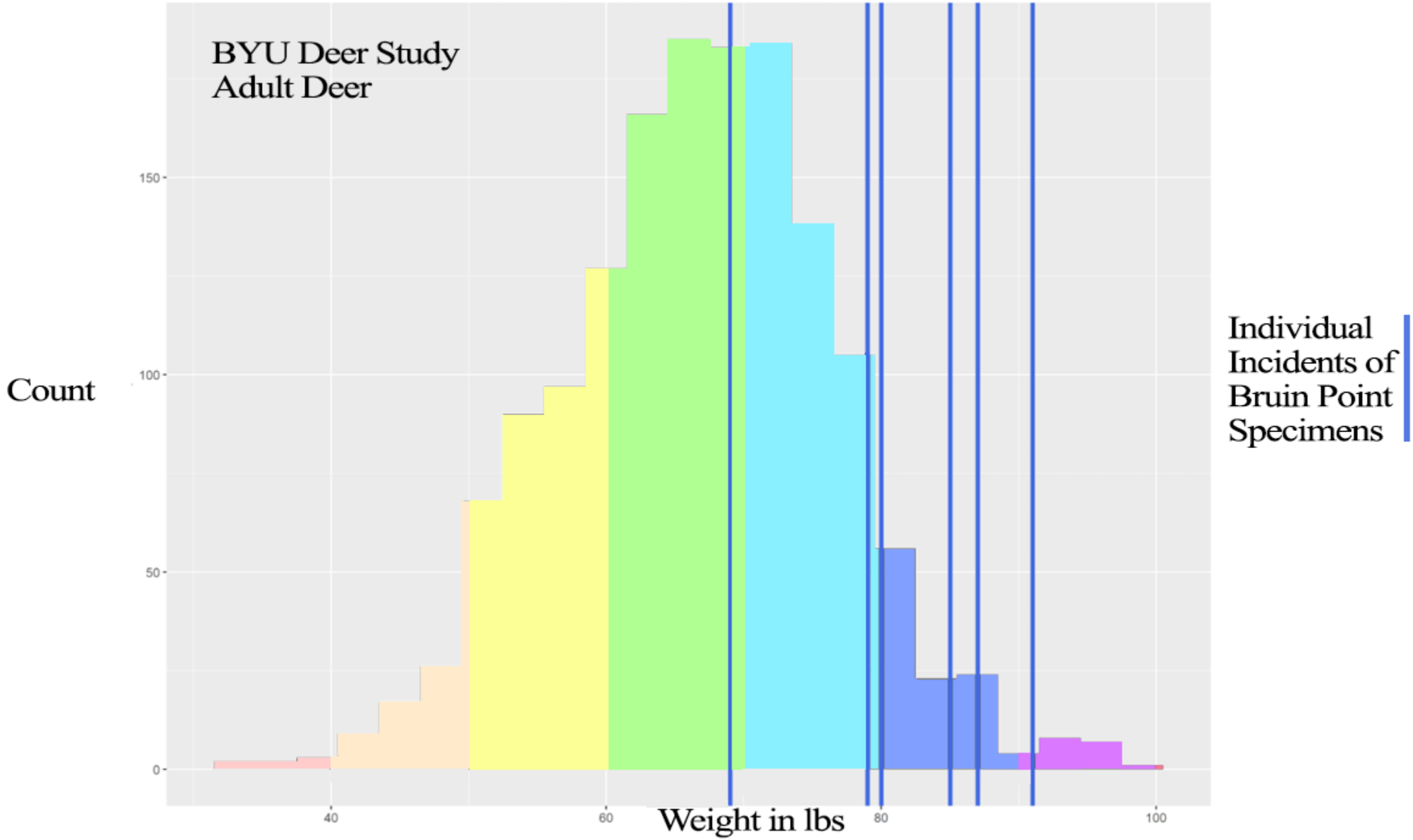
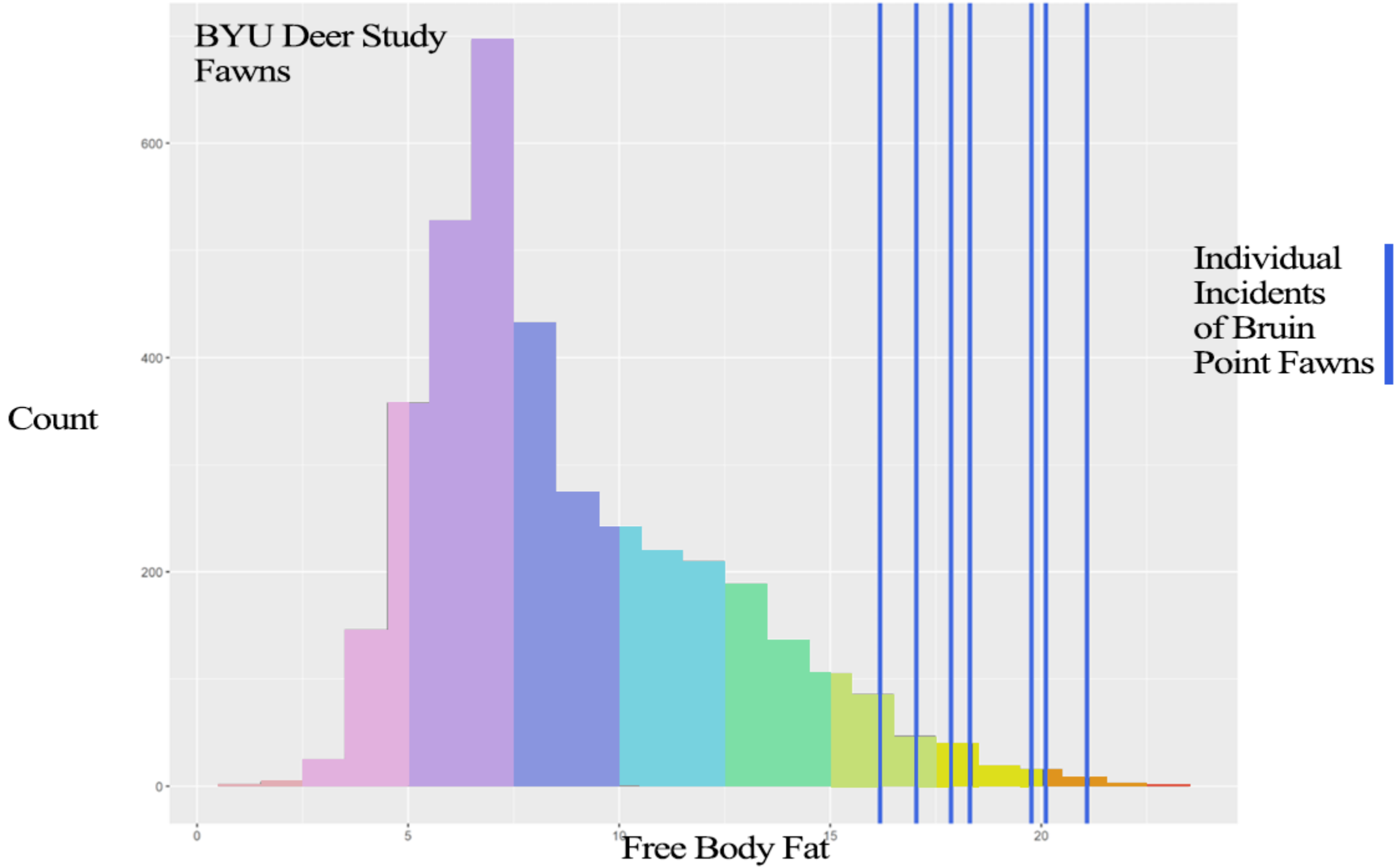
Improved habitat is directly related to improved herd health.


BYU Deer Study
Adult Deer
Count
150
100
50
0
40
60
80
100
Weight in lbs
Individual
Incidents of
Bruin Point
Specimens


BYU Deer Study
Fawns
Count
600
400
200
0
0
5
10
15
20
Free Body Fat
Individual
Incidents
of Bruin
Point Fawns

This deer was harvested at Bruin Point in the 2023 deer season. The layer of fat demonstrates the higher quality of forage available in treated areas.

The same benefits observed with wildlife, also apply to high elevation cattle grazing.

The open canopy of aspen forests provides superior forage and improved water sources.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