

THE HEAT IS ON

Species feeling the effects of climate change



Quaking Aspen

Populus tremuloides

Region:

Rocky Mountains

Area affected:

Colorado

Climatic change:

Drought

Impact:

Rapid dieback

ABOUT THIS SPECIES

With its stark white trunks and brilliant gold autumn foliage, quaking aspen is one of the best known and loved trees in the American West. It is actually found throughout the northern and coniferous forests from eastern Canada to western Alaska—the most extensive range of any tree species on the continent. But is most conspicuous in the West, where it is frequently one of the only deciduous tree species in a given forest. Groves of aspen are typically all clones, with new stems sprouting from a connected root system, although the tree will also grow from seed, particularly in areas disturbed by fire or logging. Aspen stands are tremendously important ecologically, typically supporting a diversity of birds, butterflies and flowering plants.

DESCRIPTION OF IMPACT

Over the past decade, a troubling malady called “sudden aspen decline” (SAD) has spread across the southern Rocky Mountains. First observed in the San Juan Range in southwestern Colorado in 2004, SAD is characterized by the unusually rapid and wide-scale dieback of branches and mortality in aspen. **By 2010, SAD had affected over 1.2 million acres, or 17 percent of the aspens in Colorado, with mortality of over 50 percent and very little new regeneration in many areas.** While the exact cause of SAD has not been identified, ample evidence indicates that climate change is playing an important role: The region experienced unusually hot and dry conditions in the years leading up to the outbreak. Mortality was also worst in the hottest and driest areas, particularly in lower elevation stands and on south-facing slopes.

References

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