



Photo of Tetons in western WY - Les Koch



Wyoming State Tree
Plains Cottonwood

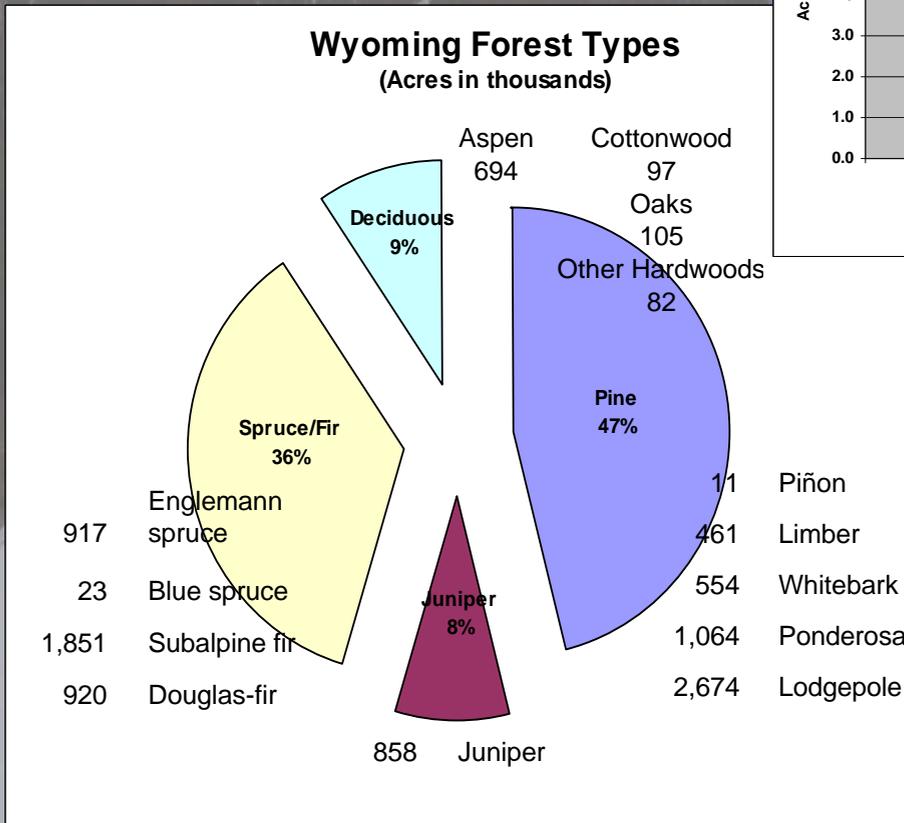
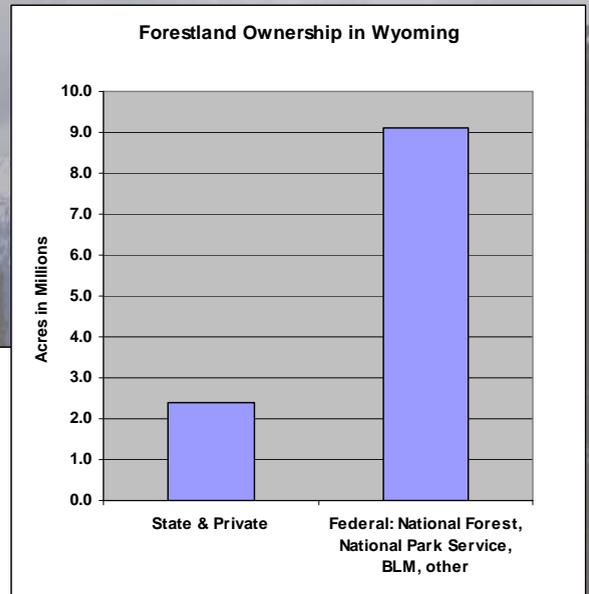
Wyoming Forest Health Highlights 2008

The Forest Resource

Wyoming has over 11 million acres of forests that surround a vast topography of plains and prairies, rivers and lakes, mountains and canyons. Approximately 9 million acres are federal forests, and 2.4 million acres are managed by the state and private landowners.

Two large, and widely-visited national parks are in the northwest corner of Wyoming: Yellowstone NP and Grand Teton NP. Bighorn, Bridger-Teton, Medicine Bow, and Shoshone National Forests occur within the state, while 4 other national forests lay along the state borders and spill-over into Wyoming: (Ashley, Black Hills, Caribou-Targhee, & Uinta-Wasatch-Cache).

Total Forestland Acres Total Timberland Acres
 11,448,000 6,002,000



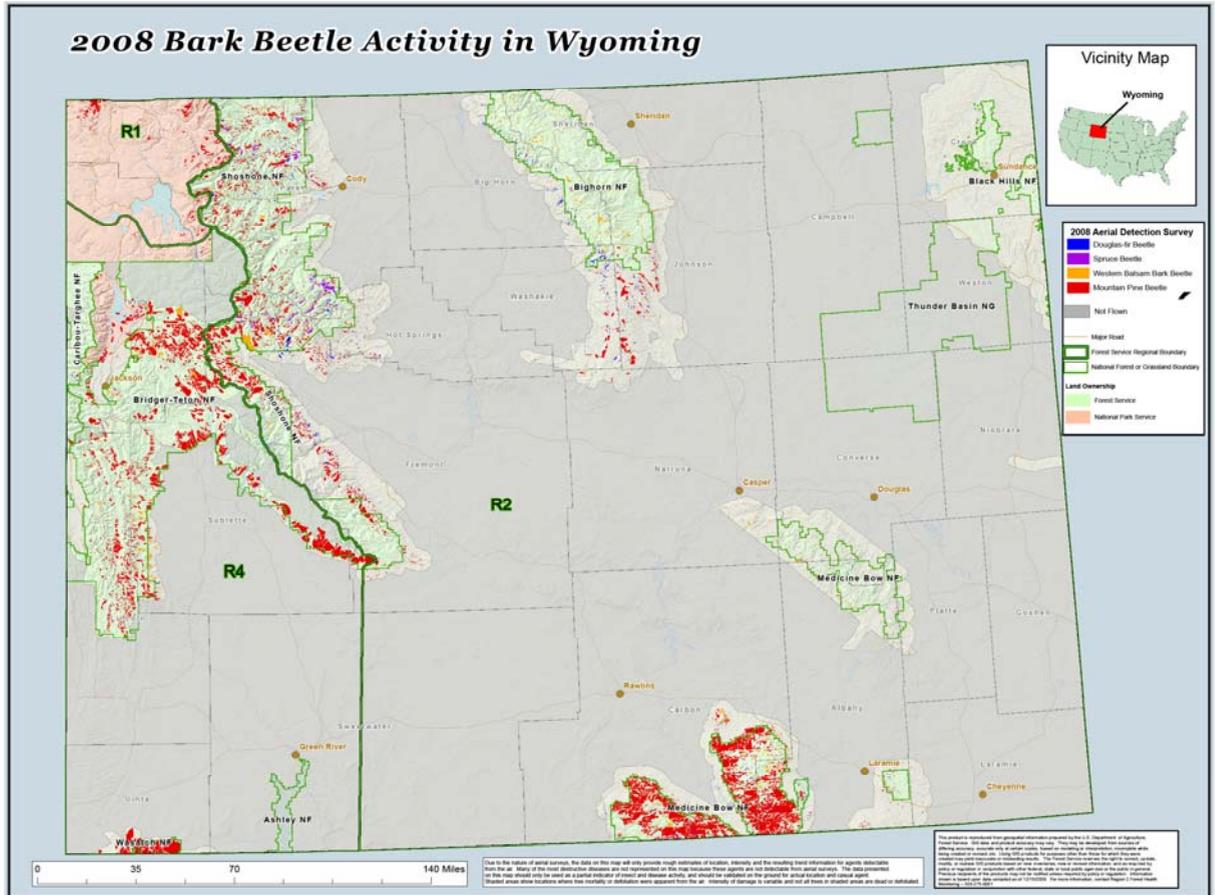
Special Issues

Increasing Bark Beetle Populations:

Mountain pine beetle populations attacking ponderosa, lodgepole, limber, and whitebark pines have risen throughout Wyoming and some to epidemic levels in favorable forest sites. There have been increases in western balsam bark beetle in subalpine fir stands, spruce beetle populations in Engelmann spruce forests, and Douglas-fir beetle in Douglas-fir sites. Aerial surveys are conducted yearly and help with the detection and monitoring of these beetle populations.

Increasing Bark Beetle Populations in Wyoming	Number of Acres with Tree Mortality (in thousands)
Mountain Pine Beetle	1,172
Western Balsam Bark Beetle	69
Spruce Beetle	30
Douglas-fir Beetle	22

Forest Health



Mountain Pine Beetle (MPB)

MPB population levels have significantly increased in all of the forests throughout Wyoming. The largest outbreaks of the beetle are occurring in lodgepole pine stands, but ponderosa, limber, and whitebark pines also have increasing MPB activity.

In **Grand Teton and Yellowstone National Parks**, because of the widespread pine mortality caused by MPB, high value recreation and administrative sites are receiving suppression treatments to prevent and reduce further losses of the pines. The greatest concern to Park officials is the continued loss of whitebark pines. During the past 6 years, over ½ million whitebark pines have been killed in the Parks. Damage has been so great that even National Parks are deploying verbenone repellent pheromone to high-value "plus" trees in an effort to minimize the impacts of this beetle. Efforts are underway to identify and protect blister rust resistant

whitebark pines and collect seed for future propagation and restoration.

On the **Bridger-Teton and Shoshone National Forests**, the large MPB outbreaks are occurring at a landscape level in several mountain ranges. On the **Bighorn NF**, lodgepole, ponderosa, and limber pines are damaged by MPB on both the east and west sides of the Bighorn Mountains. A spectacular, landscape-level epidemic of MPB was evident across the lodgepole pine forest cover type of the **Medicine Bow NF**. MPB populations were rapidly increasing in the mountain ranges the southern portions of Wyoming. If the current rate of intensification and spread of MPB continues, most of the mature, large diameter lodgepole pine forests in southern Wyoming will be killed within 3-5 years. Suppression efforts are occurring on most of these national forests. These include sanitation, single tree preventative insecticide treatments and the use of verbenone, a repellent pheromone for mountain pine beetle.

In addition to mountain pine beetle, other bark beetle populations are also increasing and killing even more forest conifers.

Spruce Beetle (SB)

Dead and dying spruce trees killed by spruce beetle were detected on 30,000 acres in Wyoming forests during 2008 aerial surveys. Spruce beetle caused tree mortality is difficult to detect from the air and ground surveys are used to evaluate active new areas of spruce beetle activity. New sites with spruce beetle outbreaks were found on the Bighorn and Medicine Bow National Forests. Areas with previous outbreaks indicated that the spruce beetle activity had intensified and spread on the Bridger-Teton and Shoshone National Forests.

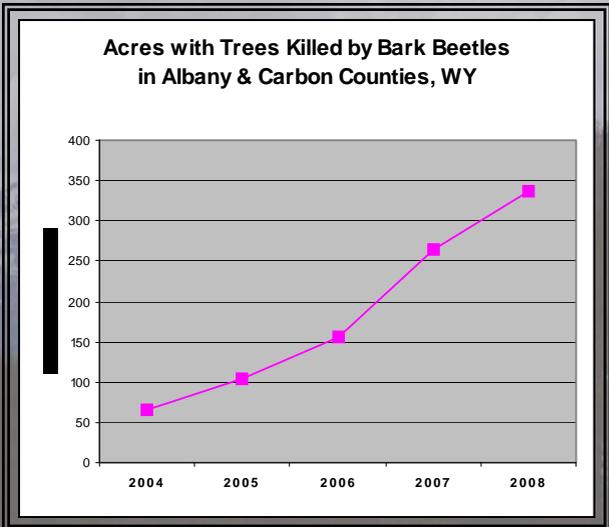
Western Balsam Bark Beetle (WBBB)

Western balsam bark beetle and root disease, and a variety of other agents, cause subalpine fir mortality problems in Wyoming. This mortality complex continues to kill millions of subalpine firs in the Rocky Mountain forests. Also, frequent wind events causing widespread blowdown to firs, spruce, and pines are evaluated and monitored by forest health staff. The wind-thrown trees are potential breeding grounds for spruce beetle and western balsam bark beetle.

Douglas-fir Beetle (DFB)

Tree mortality associated with Douglas-fir beetle occurred on each of the large forests in Wyoming. In some locations the beetle activity has intensified killing more Douglas-firs and in other sites the beetle populations are reducing due to depletion of the host tree type. Douglas-fir mortality also occurs with Douglas-fir beetle attacking trees stressed by several prior years of heavy western spruce budworm defoliation. Salvage logging of dead Douglas-firs and use of the Douglas-fir bark beetle repellent pheromone (MCH) have been used in areas with intense Douglas-fir beetle activity.

The Medicine Bow National Forest in southern Wyoming, is mostly located in Albany and Carbon Counties. The bark beetle populations in these two counties have increased dramatically over the last 5 years. Mountain pine beetle caused mortality to lodgepole, ponderosa, and limber pines increased the most, from 1000 acres in 2004 to 100,000 acres in 2008. Beetles on spruce, Douglas-fir, and subalpine fir (western balsam bark beetle) also increased in population sizes in Albany and Carbon Counties.



For More Information:

http://slf-web.state.wy.us/forestry/health2.aspx	http://www.fs.fed.us/r2/fhm/	http://www.fs.fed.us/r1-r4/spi/fhp/index.html
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