

2014 Wyoming Forest Health Highlights

Mountain pine beetle

Mountain pine beetle (MPB) activity slightly increased in Wyoming. Statewide, the number of acres affected declined from 180,000 acres in 2012 to 82,000 acres in 2013 but increased to 113,000 acres in 2014 (**Fig. 1**). Since 1996, the total number of affected acres is over 3.4 million.

MPB activity increased in the Black Hills; namely Weston and Crook Counties. Aerial photograph interpretation detected 760 new acres of mortality in this area.

Despite much of western and southern Wyoming's pine forests having been affected by past MPB activity, there are large expanses of susceptible lodgepole pine stands in north-central Bighorn National Forest. MPB activity continues at low levels in ponderosa pine on the eastern edge of the Bighorn Mountains in Johnson and Sheridan Counties. In pure stands of lodgepole pine, most mature trees have succumbed to MPB attack while younger and regenerating trees survive (**Fig. 2**).

Remote stands of ponderosa pine in Natrona, Goshen, Platte, Laramie, Albany, Converse, and Campbell Counties remain largely devoid of MPB.

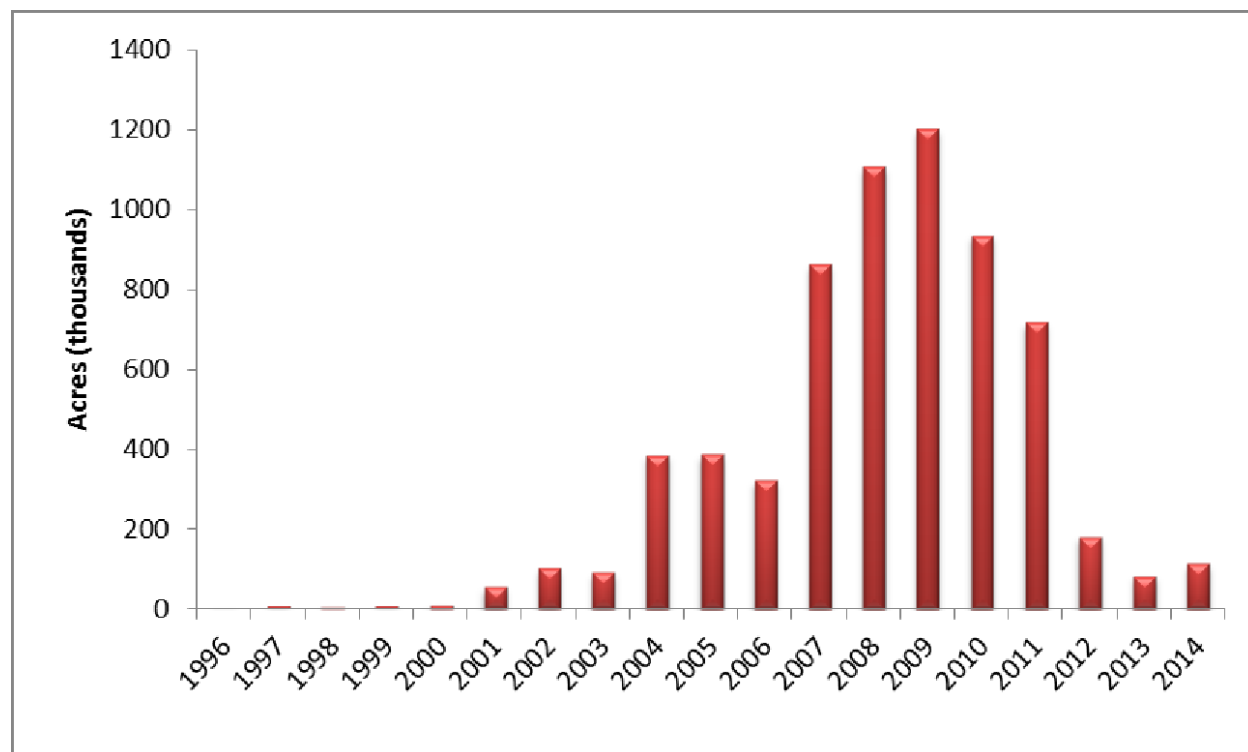
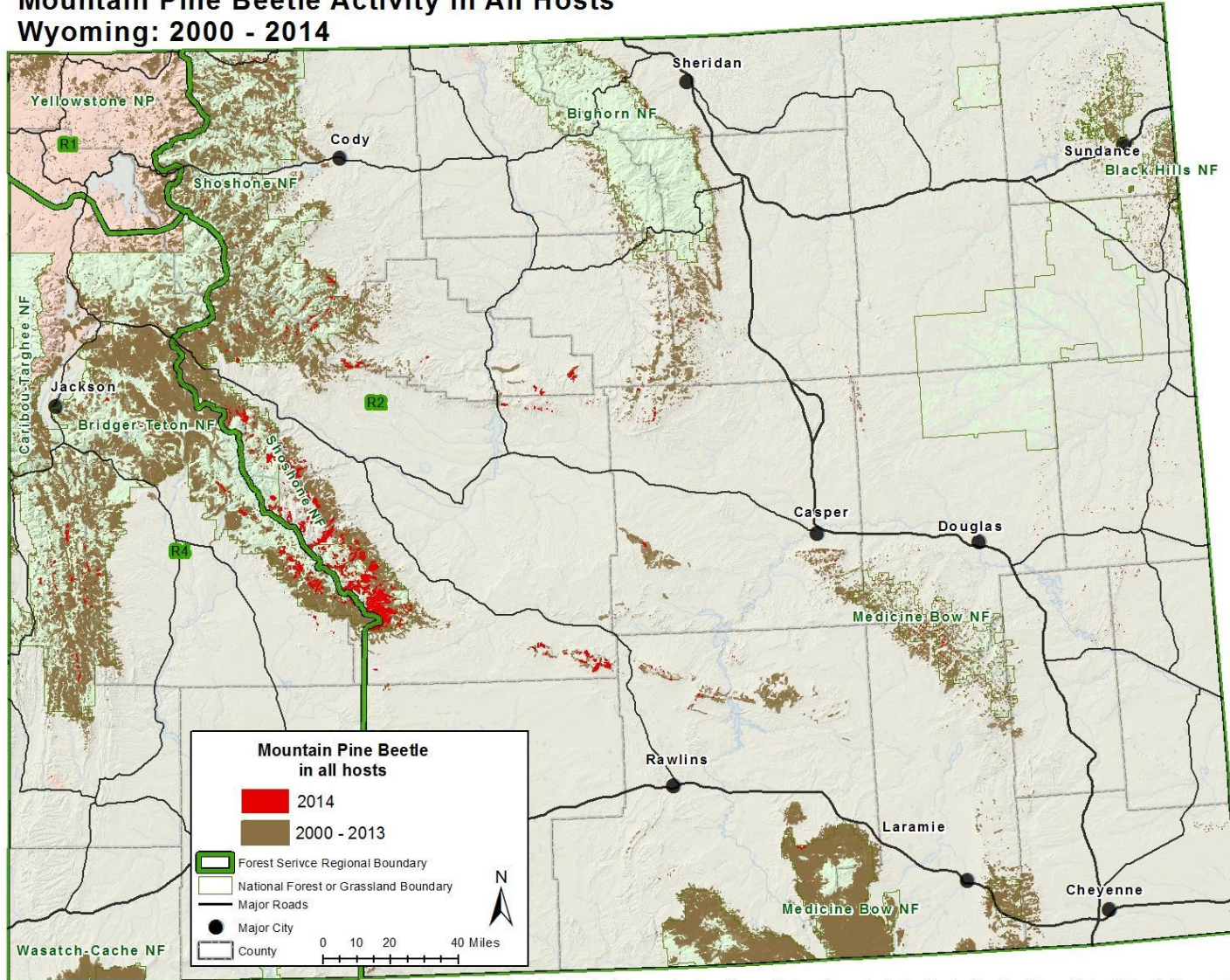


Figure 1. Annual acres affected by mountain pine beetle.



Figure 2, Mountain pine beetle damage in lodgepole pine on the Medicine Bow National Forest, 2014. Photo: Brian Howell

Mountain Pine Beetle Activity in All Hosts Wyoming: 2000 - 2014



Due to the nature of aerial surveys, the data on this map will only provide rough estimates of location, intensity and the resulting trend information for agents detectable from the air. Many of the most destructive diseases are not represented on this map because these agents are not detectable from aerial surveys. The data presented on this map should only be used as a partial indicator of insect and disease activity, and should be validated on the ground for actual location and causal agent. Shaded areas show locations where tree mortality or defoliation were apparent from the air. Intensity of damage is variable and not all trees in shaded areas are dead or defoliated.

Spruce Beetle

With an increase of 90,000 acres detected in 2014, a total of 638,000 acres have been affected by spruce beetle statewide (**Fig. 3**). There are large expanses of dead standing spruce in the Shoshone National Forest (**Figure 4**).

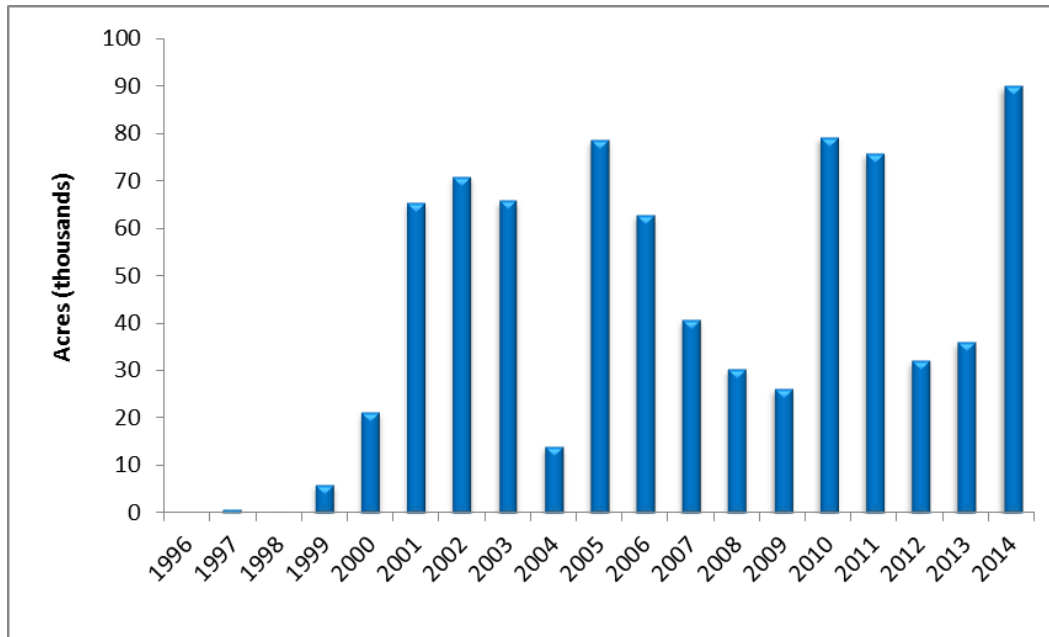


Figure 3. Annual acres of observed spruce beetle activity in Wyoming. Not all areas were surveyed every year.



Figure 4. Dead standing spruce in the Shoshone National Forest

Spruce Beetle Activity in Wyoming: 2000 - 2014

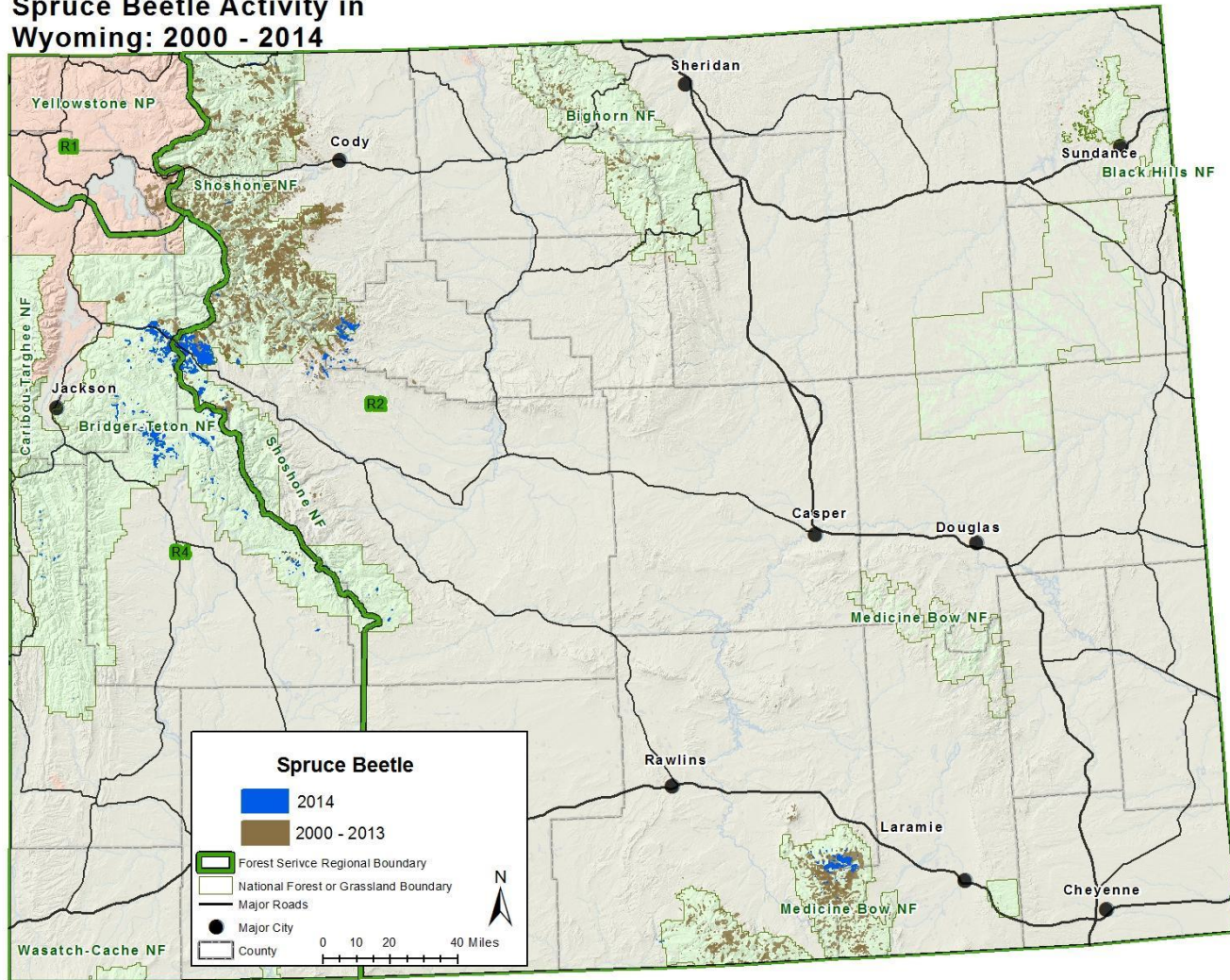


Figure 5. Map of 2014 Spruce beetle damages in forests in Wyoming

Douglas-fir beetle

Past tree mortality from Douglas-fir beetle has been detected on over 430,000 acres, primarily during the early and mid-2000's. Expansion has remained at low levels for several years with only 3,700 acres affected in 2014 (**Fig. 6**). The majority of this year's activity was detected in Hot Springs County.

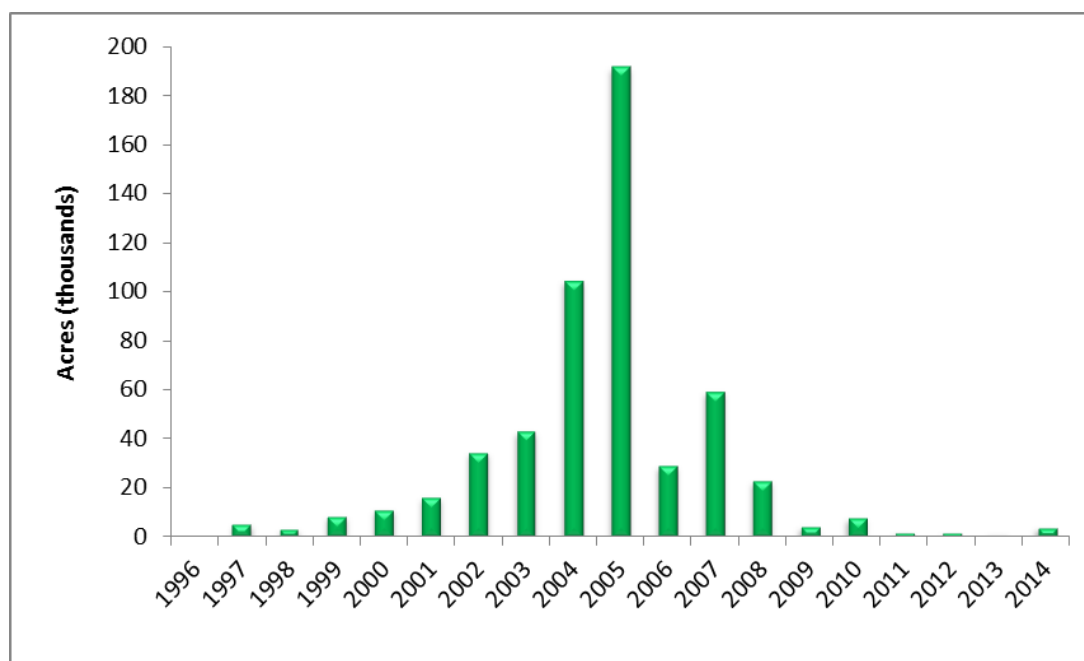


Figure 6. Douglas-fir beetle activity; not all areas were surveyed every year.

Exotic Species

Two exotic species of interest to Wyoming, European gypsy moth and emerald ash borer, were not detected in 2014. Balsam wooly adelgid was detected for the first time by aerial surveys near the Idaho border in Park and Teton Counties. This insect causes growth deformities, growth loss, and eventual mortality in subalpine fir and other true fir species. While this pest has been in western North America for decades, balsam wooly adelgid was first detected in northern Idaho in 1983. Since then, its range has expanded south and east and has caused extensive mortality in subalpine fir.

