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## 2009 FOREST HEALTH CONDITIONS HIGHLIGHTS STATE AND PRIVATE LANDS-ARIZONA

Easily the biggest detection in 2009 was the discovery of White Pine Blister Rust (WPBR) in eastern Arizona. In May it was found infecting a number of pines near Hawley Lake. In subsequent examinations of eastern Arizona, two more major sites were detected north of Hannagan Lodge and northeast of McNary. The non-native disease had been detected in New Mexico since 1990 and was expected to show up in Arizona. This complex disease will likely cause extensive branch dieback of Southwestern white pines in Arizona, and top-kill if a trunk infection occurs. In addition, there is a theory of long-distance infection from northern California that is gaining more support.

Aspen decline continues to impact stands mainly growing at the lower elevations. In Coconino County, up to 95% of the aspens growing around 7500' in elevation have been lost since 2000. Several insects and disease have been associated with this mortality but appear to be secondary in nature. Lack of regenerative fires and long-term drought are also considered major factors in aspen decline.

Pinyon needle scale (PNS) continued to spread in the Payson area in 2009. This defoliating insect appeared abruptly in 2007 in Payson, and has also been detected in two surrounding communities. The prognosis for this native insect in this area is continued expansion, based on the widespread distribution of this insect in Prescott. Mortality of pinyons caused by this insect, and conversion to oak and juniper, has already been noted on drier sites in the Prescott area.

The unusual late spring, early summer moisture triggered the development of a number of forest diseases. Gymnosporangium rusts elicited a number of symptoms in spring, from dramatic telia on Arizona Cypress on the Catalina Mountains, to galls on junipers in Payson and brooms in Prescott in May. In addition, extensive Comandra blister rust infections were noted on the alternate host for this native disease in the Prescott area in early September. And finally, walnut anthracnose disease was very widespread in the Prescott area in September, and was scattered throughout a number of other areas in the state.

An unexpected increase in the spread of an unknown leafhopper on walnuts was also detected in 2009. Extensive "leafhopper burn" of walnuts was observed in the Payson, Star Valley and Pine-Strawberry area. In addition, it was also noted in Oak Creek Canyon. It was first observed in large numbers in Star Valley in 2005, but lightly scattered throughout the rest of northern Arizona. Efforts are underway to identify the species to determine if it's native, and research its life history if available.

Fall webworm continued to defoliate an assortment of trees in Gila County. In addition, new hosts were noted in September 2009 including Arizona Sycamore, Arizona Alder, English walnut, chokecherry and birch. This insect has been reoccurring since about 2007, and in addition has spread above the Mogollon Rim east to Show Low and over to Vernon. Prior to 1999 it had not been found in these areas. Climate change may be a factor in the spread of this insect to higher elevations, with warmer winter temperatures allowing more overwintering cocoons in the soil to survive.

An assortment of other insects, diseases, and weather-related conditions were noted in 2009. However, bark beetle activity appears to be at a very low level statewide, and it's unknown how long this condition will last.

For further information about any of the detections mentioned in these highlights, contact Bob Celaya, Forest Health Specialist, Arizona State Forestry Division at 602-771-1415

