Mexican Soapberry Borer Approaches Oklahoma

Ron Billings and L. Allen Smith
Texas A&M Forest Service

In 2009, 2010 and 2011, the Texas A&M Forest Service received numerous reports from private landowners of dying western soapberry trees and infestations of the invasive soapberry borer. This flatheaded wood borer, known to entomologists by its Latin name *Agrilus prionurus*, is a native of Mexico. Presumably, the insect was introduced into Texas in the late 1990s, possibly on infested firewood. By the end of 2011, a total of 50 counties were known to be infested, primarily in Central and South Texas (see map).

In 2012 and 2013, however, reports of soapberry borer activity abruptly declined. Presumably, the February 2010 freeze had greatly reduced soapberry borer survival. Few calls or e-mails were received from Texas landowners involving soapberry borers and only one new county – Navarro County - was added to the distribution map in 2012.

In October 2013, an active infestation of soapberry borers was reported through the webpage www.texasinvasives.org. Eight or ten large soapberry trees were under attack on a private ranch in Van Alestyne, a small town in southern Grayson County, north of Dallas. This infestation was checked by the authors on October 22 and confirmed to be the invasive species. This report not only represents a new county on the distribution map, but the fact that it occurs in Grayson County, on the border with Oklahoma, suggests that the invader may be approaching the state line with Oklahoma. Grayson County would be the second Texas county that borders Oklahoma with known soapberry borer attacks, since infestations were reported and confirmed from Wichita County in 2010.

An examination of infested trees near Van Alestyne revealed that the attacks were recent. Some of the infested trees still contained green branches in the lower crown, but patches of infested bark extending from the ground into the larger branches had been flaked off by woodpeckers. Interestingly, we found one live adult beetle resting on the bark and several others that had recently died as they tried to emerge from infested trees. Numerous “D”-shaped holes in the bark provided evidence that many adult beetles had successfully emerged from infested trees. This is the first documentation of soapberry borer adults emerging this late in the season. Previously, we had only observed emergence from caged tree sections in May, June, July and early August. This suggests that the insect has a prolonged adult emergence period, as do other wood boring insects.

For the first time, we collected some predatory insects in the larvae stage from under the bark, providing evidence that native predators are beginning to feed on this invasive pest. The predators have yet to be identified to species, but appear to belong to the family Trogositidae (formerly Ostomidae). The larvae appear very similar if not the same as those of *Temnochila virescens*, a common predator of pine bark beetles. We cut log sections from one of the infested trees at this site in hopes of rearing out and identifying adults of this predatory beetle and any other natural enemies present.

The current infestation we observed is located in southern Grayson County. Thus, other landowners and city managers within Grayson and adjacent counties need to be on the watch for this destructive pest. On October 22, we checked two separate groves of soapberry trees in Sherman, about 17 miles to the north of Van Alestyne, but they were healthy (not yet attacked).

With this invasive insect now in southern Grayson and Wichita counties, it would be wise for Oklahoma forest health officials to monitor soapberry trees on their side of the Texas border. The infestation in Van Alestyne is only about 30 miles away. Healthy soapberry trees are turning bright yellow as they typically do during the fall and the fruit (clusters of yellow seeds) are visible on most trees. But if the bark is flaking off the trunk and larger branches, there is evidence of sawdust-packed galleries or trails beneath the bark, and small D-shaped holes are visible on the bark surface, beware! These are typical signs of soapberry borer attacks. Any suspected new infestations of the invasive soapberry borer in Texas, particularly within counties not highlighted on the attached map, should be reported via www.texasinvasives.org.

For more information, please contact Ron Billings at rbillings@tfs.tamu.edu or (979) 458-6650.

Known Distribution of Soapberry Borer (*Agrilus prionurus*) in Texas