



Forest Health *Notes*



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Potential for Southern Pine Beetle Activity Predicted for Four Areas on Public and Private Forestlands in North Carolina in 2018

BACKGROUND. Considered the most destructive forest pest in the South, the southern pine beetle (SPB) surpasses all other forest pests in terms of damage caused to pine forests. Periodic outbreaks occur across our state, although the last outbreak occurred in the early 2000s. The N.C. Forest Service (NCFS) cooperates with the U.S. Forest Service (USFS) to predict SPB populations each year through pheromone-baited insect traps. Trap data is compared to a model developed by the Texas A&M Forest Service to provide SPB population predictions with 75-85% accuracy. The model is based on the ratio of SPB to their primary predator, the checkered or clerid beetle, as well as other factors.

THANK YOU!

We are very grateful to the NCFS Districts and Alligator River NWR that participated in trapping this year!

2017 SPB Activity. In 2017, SPB activity was low over most of the state, but significant activity was observed in the southwestern area of N.C. (District 9) and across the southeast (Fig. 1). In and near Nantahala National Forest, more than 50 SPB spots were detected from ground checks and aerial surveys. This increase in activity was anticipated after the first SPB activity in many years was documented the year before; in 2016, SPB spots were detected in Swain, Tyrell, and Graham Counties. Before that, the last report of SPB in N.C. was in 2010 when five spots were recorded in Alamance and Richmond Counties.

2018 Predictions. This year, 2018 trapping data predicts a low year for SPB populations in most of North Carolina. There are four exceptions, where SPB spots may be expected at varying probabilities:

- **Cheoah Ranger District, Nantahala NF:** **58% chance** of SPB spots; 21% chance of more than 50 spots
- **Macon County:** **26% chance** of SPB spots; 6% chance of more than 50 spots
- **Croatan National Forest:** **24% chance** of SPB spots; 6% chance of more than 50 spots
- **Appalachian Ranger District, Pisgah NF:** **17% chance** of SPB spots; 3% chance of more than 50 spots

BY THE NUMBERS: SPB Prevention Program

- The cost-share program covers **50%** of a pre-commercial thinning operation, to reduce its susceptibility to SPB.
- Since its inception, over **73,872** acres have been managed through this program.
- Can be used in:
 - Young pine stands (up to 12 years old) with **700+** trees per acre
 - White pine stands (up to 30 years old) with **120+ ft²** basal area per acre
- As of July 2018, approximately **\$270,000** remains available.

Given the predictions for SPB populations at four areas in the state, it is increasingly imperative we remain vigilant for SPB spots statewide. To speak to the power of these predictions, in 2016, after years of no SPB activity, increasing SPB populations were predicted for Graham County and subsequent observations confirmed those predictions, as the majority of SPB activity last year was recorded in Graham County.

It is also important to remember that this only captures predictions for a small amount of N.C.'s forestland. Predictive trapping is done in one County per District, leaving the rest of our forestland unaccounted. Don't let your guard down simply because you're not near one of the four areas with the potential for SPB populations!

SPB activity is most likely to occur in pine stands that are overstocked, overmature or stagnant, or have poor soil drainage. Forests affected by littleleaf disease, annosus root rot, and other causes of tree stress may also be susceptible to SPB infestation.

The NCFS recommends the use of sound silvicultural practices to prevent SPB damage and encourages landowners to thin overcrowded stands. Proper stocking levels promote healthy trees better able to withstand SPB attacks. The NCFS Southern Pine Beetle Prevention Program (funded by a grant from the USFS) subsidizes pre-commercial thinning of pine stands. More information is available on our website at: http://www.ncforestservice.gov/forest_health/fh_spbpp.htm.

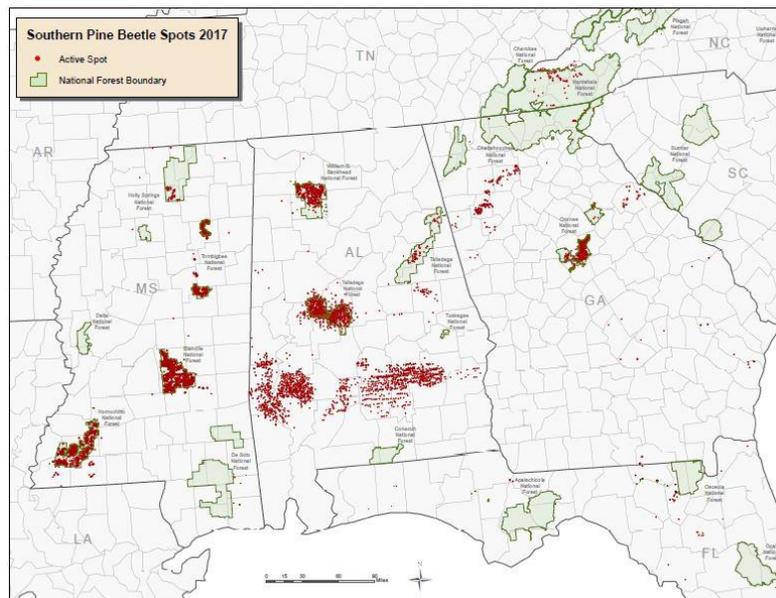


Fig. 1. Southern pine beetle spots in 2017. Map created by the U.S. Forest Service.



This publication was published in Portable Document Format (PDF) to inform and educate NCFS personnel and other forestry interests about health issues affecting North Carolina forest resources.

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