



Ips Engraver Beetle Outbreak Update, January 30, 2017

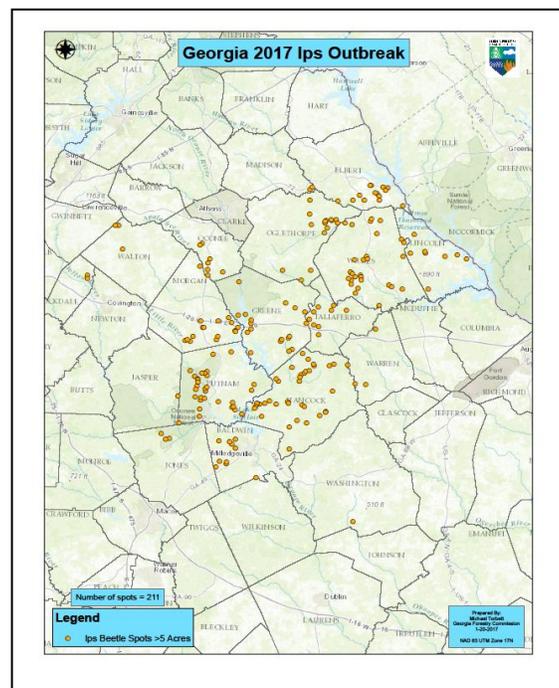
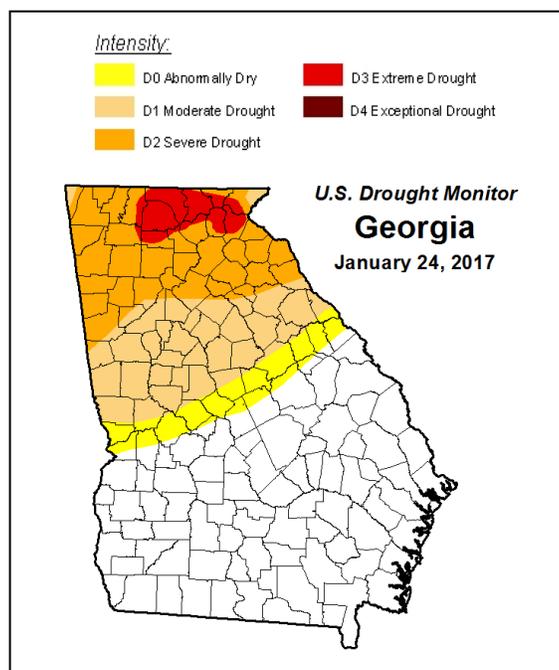
Chip Bates - Forest Health Coordinator

Ips engraver beetles continue to heavily infest drought-stressed trees in northern and central Georgia. Extended lower temperatures and normal rainfall customarily slow rapid increases in Ips engraver beetle populations. In December and January, we received rain across the state, but the US Drought Monitor still shows all of north Georgia, above the fall line, under severe to extreme drought and temperatures have remained above normal.

This drought is causing long-term damage to hardwoods and pines. Immediate damage from this drought is evidenced by dying tree tops, brown leaves and dropping needles. Long-term damage to root systems is likely. During the next two to three years, we will see both hardwoods and pines dying due to root damage suffered during this drought.

Recently, aerial surveys identified over 211 Ips infestations on private lands in central Georgia, with spots ranging from five to 60 acres. During the initial flights, more than 3,700 small spots (.25 acre or less) were noted in central Georgia. Aerial surveys continued in north Georgia during the week of January 23rd. Landowners across central Georgia are being offered assistance to mitigate damage during this unprecedented outbreak.

In the initial Ips Outbreak Report on November 22, 2016 (<http://www.gatrees.org/forest-management/forest-health/pine-bark-beetles/2016%20Ips%20Engraver%20Beetle%20Outbreak.pdf>), it was stated that sound management practices such as thinning are normally key to maintaining stand vigor and health in the prevention of bark beetle infestations. This is currently not the case, however. Despite recent rains, severe drought conditions persist and widespread Ips outbreaks have occurred.



- *Pine trees are most susceptible to attack from Ips engraver beetles during drought conditions, so thinning during these times should be avoided if possible. Ips engraver beetles normally attack stressed trees, logging debris, and damaged branches, and generally infest only small groups of trees.*

Advice from the Georgia Forestry Commission:

- With abnormal drought conditions and a greater amount of stressed trees observed, normal stand management practices such as thinning and prescribed burning should be reconsidered. Extreme drought has led to compromised root systems in existing stands, and fine feeder roots have been killed. This reduces the ability of trees to absorb and transport water. This damage will not be noticed immediately, however, long term damage will be apparent for several years.
- During the current burning season, forestry professionals must consider the overall health of the stands and conduct an assessment of the health and vigor of each stand. Soil moisture is not the only factor to be considered; burning history, fuel loads, ambient temperature, wind speed and direction, and all fire weather conditions should be taken into account prior to conducting prescribed burns. Canopy scorch, excessive stem char, and excessive fuel loads can produce results that add to existing beetle infestations. When a stand is considered healthy and vigorous, and the stand has a prescribed burn history, then an educated decision can be made about whether to conduct a prescribed burn to increase the health of the stand and produce results that meet the landowner's objectives.
- Time is required for stands to recover to a healthy and vigorous condition capable of withstanding natural and human-caused stresses. Additional stress can increase mortality from disease and insect infestations in the stands. With the extent of damage from drought in 2016/17, these stands will need adequate rainfall, sufficient time to repair compromised root systems, and time to improve the overall vigor and health of the stands.
- For these reasons, we encourage you to work with a professional forester, monitor your stands for insects and disease, determine soil moisture and overall stand conditions, and minimize additional stress factors. Drought damage can be compounded by normal stand management practices, and we encourage you to use advice from a trusted forestry professional to assist you in making decisions that will produce a stand capable of recovering and producing a healthy, sustainable forest for future generations.

The Georgia Forestry Commission is recommending landowners and consultants be very cautious when planning these activities while drought conditions remain in place. Even after drought conditions have eased, compromised root systems will continue to cause forest health issues. Any management activity that produces additional stress in these stands across northern and central Georgia could increase the risk of insect and disease activity. Whether prescribed burning or thinning, each stand must be evaluated individually. Prior to the implementation of any written management plan, a thorough onsite inspection should be conducted to determine current stand conditions. Determining adequate soil moisture, compromised root systems, the presence of insect activity, and an assessment of whether the stand has decreased vigor and health, must be considered to insure conditions are adequate to meet the landowner's needs. In severe drought, beetles are attracted to stressed trees, logging debris, and damaged branches, and stress from canopy scorch is likely to add to existing beetle infestations. Unprecedented outbreaks of Ips engraver beetles have occurred across northern, western, and central Georgia in 2016 to the present. Before the Georgia Forestry Commission assists with prescribed burns, *case by case evaluations will be performed to determine adequate stand health and vigor, soil moisture, along with a review of the stand's burning history. Stands with heavy understory, low soil moisture, compromised root systems, poor stand vigor or health, and no history of burning should be considered candidates for postponing prescribed burns.* It is the mission of the GFC to provide leadership, services and education in the protection and conservation of Georgia's forest resources. To uphold that mission, GFC professionals will use sound science and expertise to protect this resource on a stand by stand basis.

As noted, Ips engraver beetles are attracted to stressed trees, logging debris, and damaged branches, and pine trees are most susceptible to attacks from Ips during drought conditions. The Georgia Forestry Commission will err on the side of caution when advising landowners about thinning operations. The addition of stress due to thinning, accumulation of logging debris, and damage to residual trees can attract Ips beetles to stands that have already suffered from severe drought, root damage, and beetle damage. With these severe conditions, and the majority of the state under extreme drought, thinning during these times should be avoided if possible.

Please contact your local forester or Forest Health specialist if you need more information; we are more than willing to help.

The *Southern Regional Extension Forestry – Forest Health Program* produced an excellent publication on Ips bark beetles. Please follow this link: <http://southernforesthealth.net/insects/ips-bark-beetle/ips-bark-beetles-in-the-southeastern-u.s.>

Thank you for the great job that each of you do. **Call us if we can help:**

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