

# Another Bark Beetle Takes Center Stage

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**D**uring early to mid-year 2010, the Alabama Forestry Commission (AFC) received few claims of beetle infestations. However, as the fall season arrived, this situation changed. When dying pine trees started appearing in forest stands around October, calls from concerned citizens bombarded the AFC county offices. To quantify these reports, the agency conducted formal beetle detection flights.

Anytime there is a mass number of beetle spots such as this, the initial belief is that the southern pine beetle is the pest. Because such an emphasis has been placed on educating the public about that particular insect, most Alabamians became quite familiar with this devastating pine pest. After weeks of checking several infestations, AFC officials realized that the original assumption was inaccurate . . . this destruction was caused by a slightly different insect. Yes, these were indeed bark beetles that were attacking weak pines, but the majority of the damage was not caused by the southern pine beetle, but by the Ips engraver beetle instead.

What exactly created this sudden explosion of beetle spots could have been a combination of many factors, but most likely the extended dry climate of the summer was a major influence. As in 2006 and 2007, the pines became stressed from this adverse weather condition. Bark beetles then responded to the chemical change in the trees, attacking the weak ones and ultimately resulting in the trees' mortality.

A glimpse of an infestation will not normally be enough to determine the type of bark beetle attack; it usually takes a closer examination to confirm the actual species of beetle.

Although stress of a pine is a common factor for both the Ips engraver beetle (IEB) and southern pine beetle (SPB), there are differences. The SPB is primarily influenced by a nine-year population cycle. If the current year of this cycle is declining, the population may not drastically increase, even under adverse climatic conditions. This is not the case for the IEB which is mainly influenced by abnormal abiotic factors (physical and chemical aspects of an organism's environment), such as a prolonged drought, saltwater intrusion, or storm damage.

Also, after initially attacking a weak or declining pine, the SPB population will then increase exponentially in that infested tree. Because SPB is quite aggressive, it will move to neighboring pines and begin to attack even if some of them are healthy. The infestation pattern is generally one large contiguous group of dead and declining pines. This one spot will continue to grow

as more and more neighboring pines are infested. Since the IEB is considered less aggressive, it normally attacks weak pines only, not healthy ones. Dead or declining pines scattered within a stand is usually its infestation pattern. There may or may not be one contiguous group of infested trees.

Because the main pest last year was Ips engraver beetle rather than southern pine beetle, predicting the level of bark beetle attack for 2011 would be a professional conjecture at best.

Definitely, if the state continues to have extremely high temperatures that are not common for the season or if limited precipitation occurs, Alabama may experience an IEB epidemic. Weather conditions still have some influence on SPB infestation as well, but the actual year of its population cycle is a better determining factor. The spring SPB survey, however, is the best indication of what to expect from this beetle's population status.

Hopefully, the climate conditions for 2011 will be fairly normal for the state and conducive for keeping all bark beetle attacks at a low, manageable level. 🌲



Beetle Detection Flight Summary October/November 2010

COUNTY	# of SPOTS	# of TREES
Lowndes	9	270
Dallas	125	3,270
Lamar	4	55
Perry	3	320
Pickens	1	15
Walker	9	370
Choctaw	19	448
Clarke	52	1,560
Escambia	24	1,540
Marengo	106	3,180
Monroe	69	4,670
Washington	1	20
Wilcox	397	36,215
<b>Statewide Totals:</b>	<b>819</b>	<b>51,933</b>

Of the 819 total detected spots in the fall of 2010, approximately 85% were caused by the Ips Engraver Beetle.

Photo: Pest and Diseases Image Library, Bugwood.org