

Slash Management for Controlling Piñon *Ips* Bark Beetle



The reduced moisture levels in Western Colorado has created ideal conditions for many native bark beetle populations to increase. As their numbers expand, our piñon pine forests will be at risk to infestations due to the severity of the drought and susceptible stand conditions. Of particular interest in Western Colorado is the *Ips* engraver bark beetle, *Ips confusus*, which attack piñon pine trees.

Ips beetles have short life cycles, only eight weeks, and depending on warmer weather may produce as many as four generations per year between April and October. The short development time increases the length of their active period compared to other native bark beetles. The mountain pine beetle (MPB) that has only one generation per year (this beetle attacks ponderosa and lodgepole pines) or the spruce beetle that typically completes its development in two years (attacks Engelmann spruce). *Ips* beetle activity begins around mid-April when the weather has become warmer, usually when nighttime temperatures are above 40 degrees for two consecutive weeks. The early April emergence is comprised of the adults that were laid as eggs the previous fall, usually around September/October.

The first generation that emerges in the spring will infest stressed trees or freshly cut green logs/trees and the associated slash remaining on site (branches removed after tree cutting but still green). This behavior is different from MPB in several ways. MPB *must* have standing (vertical) live green trees that are in excess of six inches in diameter. *Ips* beetles do not require standing live trees. They can infest any green material that is larger than one inch in diameter, such as slash, freshly split green firewood and any part of a standing green tree. Therefore, some special recommendations are in order.

- Even with increased winter moisture, expect trees to be in stress mode, which attracts the bark beetle
- With higher *Ips* beetle population levels, expect these beetles to attack any 'fresh', green recently cut material (over one inch in diameter)
- *Ips* beetles have an eight-week life cycle with the first generation emergence in mid-April. Additional generations may occur again in mid-June, in mid-August and in mid-September.
- *Ips* beetle infested material may be treated in the following ways:
 - Grinding or chipping the logs/slash. This destroys the larvae and dries the slash out making it useless to the beetles for reproduction
 - Transport the material to a safe site further than one mile to forested acreage
 - Pile and burn the infested or green material (be aware of your local pile burning regulations)
 - Bury the material greater than eight inches deep in the soil
 - Debark the logs – impractical with small branches and slash
 - The Log Wizard debarker is a chainsaw attachment and is useful on tree stems. Visit www.LogWizard.com for dealer locations.
 - Solar treatments, with or without clear plastic, will be ineffective because of the short life cycle of *Ips* beetle
- If you cut green material after mid-October when *Ips* are not active, the beetle may still colonize your material in mid-April during the first emergence. To prevent colonization, ensure all material is dry (no green wood remaining) before late March.
- If you cut green material between April and October when *Ips* beetles are most active, remove the material within a couple days to prevent attracting the beetle to your property
- Green material may stay green long enough for colonization for up to six months, especially if it has been stored in shade at high elevations

The *Ips* bark beetle will typically enter into hibernation when nighttime temperatures drop below 40 degrees for two consecutive weeks. During periods of high bark beetle population levels, the hibernation period is the best time to remove green trees from your property. It is important to ensure that any slash or wood created is dry prior to beetle emergence in the spring.