

# Forest Pest Bulletin



SOUTH DAKOTA  
DEPARTMENT OF AGRICULTURE  
DIVISION OF RESOURCE  
CONSERVATION & FORESTRY



BULLETIN NUMBER 50

Revised: March 2018

## Red Turpentine Beetle

### CAUSAL AGENT

*Dendroctonus valens*

### HOSTS

Locally, Ponderosa (*Pinus ponderosa*) and Lodgepole (*Pinus contorta*) pine are hosts.

Other host species include Red (*Pinus resinosa*), Jack (*Pinus banksiana*), White (*Pinus strobus*), and Sugar pine (*Pinus lambertiana*).

### SYMPTOMS

Attacks by Red turpentine beetles are usually limited to the lower 6 feet of trees. Pitch tubes, which consist of bark borings, frass, and resin are usually reddish in color and up to 2" across (Fig 1). Another indicator of attack is the boring dust or small pitch globs that fall to the base of the tree (Fig 2). Beetles can also introduce blue stain fungi into the tree, discoloring the sapwood under the bark. Red turpentine beetles do not usually kill trees by themselves. Other bark beetles or diseases often attack infested trees and the combination of attacks kills the tree.

### LIFE CYCLE

Adult beetles usually attack trees during warm weather in the spring and summer. The female beetle initiates the attack and is soon joined by a male. After mating, the eggs are laid in a mass along the side of the egg gallery. The parent beetles continue to feed in the gallery for several weeks, then die within the gallery or sometimes bore through the bark to attack other trees. Eggs are shiny, opaque white,



Fig. 1 Pitch tubes of red turpentine beetles. Photo credit: Bob Oakes, [www.forestryimages.org](http://www.forestryimages.org)



Fig 2. Sawdust and small pitch globs from red turpentine infestation. Photo credit: Donald Owen, California Department of Forestry and Fire Protection, [www.forestryimages.org](http://www.forestryimages.org)

ovoid cylindrical, and about 1 mm long. Eggs hatch in 1 to 3 weeks and larva are white, legless grubs, except for a brown head capsule and a small brown area on the posterior end. Larva feed side by side for about 8 weeks, forming irregularly margined, fan-shaped galleries. Larva may reach lengths of ½ inch when fully grown. The next stage is pupae, which develop in roughly 1 week, then become callow adults. The winter is spent in the tree, hibernating in the larval and adult stages. Adults are reddish-brown in color and 3/8" in length (Fig 3).



Fig. 3 Adult red turpentine beetle. Photo credit: Bob Oakes, [www.forestryimages.org](http://www.forestryimages.org)

### MANAGEMENT

Red turpentine beetles seldom kill trees but to prevent against attacks, avoid damaging trees during road building, home construction, logging, and land clearing. Drought, fire, lightning, or the activity of other insects can also predispose trees to attack. Healthy trees can be attacked if they are close to freshly cut logs, firewood, or lumber so these items should be kept away from healthy trees. Prune trees in the winter months when the beetles are not active. Root diseases are suspected to be associated with Red turpentine beetle infestation, so trees should be inspected for any signs of root decay, which would warrant removal of a tree. High value trees may be sprayed with Sevin XLR or Astro in spring to prevent against attacks.

Due to numerous pesticide labels and/or label changes, be sure the product label includes the intended use prior to purchase or use. Please read and follow all pesticide label instructions and wear the protective equipment required. Spraying pesticides overhead increases the risk of exposure to the applicator and increases the likelihood of drift to non-target areas. Consider the use of a commercial applicator when spraying large trees due to the added risk of exposure and equipment needs. The mention of a specific product name does not constitute endorsement of that product by the South Dakota Department of Agriculture.

For further information contact your nearest South Dakota Division of Forestry Office. Hot Springs 605-745-5820; Lead 605-584-2300; Mitchell 605-995-8189; Pierre 605-773-3623; Rapid City 605-394-2395; Sioux Falls 605-362-2830; Watertown 605-882-5367.

South Dakota Human Relations Act of 1972, S.D.C.L. 20-13 prohibits discrimination on the basis of race, color, creed, religion, sex, national origin, ancestry, or disability.