**SIREX WOODWASP**

* [Sirex noctilio Fabricius]

**Problem:** A native of Europe, Asia, and northern Africa, sirex woodwasp (SWW) has devastated pine species in its introduced range. Here in the U.S., SWW has the potential to threaten and kill native and exotic pines from coast-to-coast. Loblolly, scotch, shortleaf and other hard pine species are known to be susceptible. Pine plantations are particularly vulnerable. The damage process begins when females drill their ovipositors into the outer sapwood to inject a symbiotic fungus (*Amylostereum areolatum* (Fr.) Boid.) toxic mucus, and eggs. The fungus and mucus then act together to kill the tree and create a suitable environment for larval development.

**Identification:** Adults are generally 25 to 38 mm long (1 to 1 ½ in) with black antennae. Females generally have dark metallic blue or black bodies and yellow to red legs (Fig. 1). Males have orange middle segments on the abdomen and thickened black hind legs (Fig. 2). Larvae are creamy white, legless, and have a distinctive dark spine at the rear of the abdomen.

**Signs and Symptoms:** SWW can attack living pines, while native woodwasps attack only dead and dying trees. At low populations, SSW selects stressed and injured trees for egg laying. Foliage of infested trees initially wilts, and then changes color from dark green to yellow (Fig. 3), and finally to red during the 3-6 months following attack. Infested trees may have resin beads or seeps at the egg laying sites (Fig. 4), which are more common at the mid-bole level. As adults emerge, they chew round exit holes...
that vary from roughly 3 to 8 mm in diameter (⅛ to ⅜ in) (Fig. 5).\textsuperscript{2,3,6}

**Similar Species:** There are more than a dozen species of native woodwasps (horntails) that occur in North America.\textsuperscript{4} One of them, pigeon tremex [*Tremex columba* (L.)] (Fig. 6), is a native horntail, but prefers deciduous trees.\textsuperscript{1} The paper wasp (*Polistes* spp.) (Fig. 7) and cicada killer [*Sphecius speciosus* (Drury)] (Fig. 8.), have various yellow abdominal markings and have a constricted body shape.\textsuperscript{1} Paperwasps feed on nectar and insects and cicada killers kill and feed on cicadas.