



Giant Resin Bee

Authored by Theresa A. Dellinger, Diagnostician, and Eric Day, Insect ID Lab Manager, Department of Entomology, Virginia Tech

Description

Giant resin bees (*Megachile sculpturalis* Smith, Hymenoptera: Megachilidae) are large insects (about 1.9 cm or 0.75") with a cylindrical body and stout jaws (Fig. 1). They have a dark head and abdomen with yellow-brown hair on the face, thorax, and the first segment of the abdomen behind the "waist." The wings are a transparent brown color that darkens toward the tips. Male giant resin bees have a truncated, squared abdomen while the females have a more tapered, pointed abdomen. Giant resin bees can be distinguished from bumblebees and carpenter bees by their cylindrical bodies and the appearance of their abdomens. Giant resin bees do not have hairy abdomens like bumblebees, nor are their abdomens shiny like carpenter bees.



Figure 1. Giant resin bee, *Megachile sculpturalis* Smith. (David Cappaert, Bugwood.org)

Habitat

Giant resin bees are found around decks, porches, and other wooden structures where the females make their nests in and between wooden boards. They are also seen foraging for pollen on flowering plants.

Females use their large jaws to collect resin, thus their common name "giant resin bee." These are solitary bees that do not form colonies, although several females may build their nests together in the same area.

Life Cycle

During the summer, females construct individual brood cells in an existing tube or cavity using wood particles and mud. The female provisions each brood cell with pollen that she collects and carries on the underside of her abdomen. She forms the pollen into a ball and lays a single egg on the pollen inside the cell before closing the cell. Brood cells are often capped with resin, mud, and wood fibers. The female will continue to construct other brood cells, often completing as many as eight or ten. The larva hatches from the egg and spends the winter inside the cell. After consuming the pollen ball, the larva pupates in the spring and emerges from the cell as an adult in early summer.

Type of Damage

Despite their large jaws, giant resin bees do not bore holes into wood. They use available holes made by carpenter bees or other insects. They do not enlarge existing holes or produce further damage to wood. Females will also build their nests in small crevices between wood boards, or use tunnels in woody debris.

Control

Chemical control is usually not recommended for giant resin bees, but if desired, locating and destroying each nesting hole will limit their population. Altering their habitat will dissuade giant resin bees from nesting in the area. Because giant resin bees cannot make their own nesting holes, control is based on discouraging carpenter bees from nesting in wood by painting the surface of the wood.

Existing carpenter bee holes can be filled with wood putty, which makes them unattractive to giant resin bees. If there are no nesting holes in the area, female giant resin bees should relocate to a different area where nesting holes are more accessible.

Interesting Facts

Giant resin bees are native to Asia and probably arrived in the United States by ship in wood containing their nests. They were first identified in North Carolina in 1994 and have since spread throughout the southeastern United States. Given their large size and dark coloration, giant resin bees may appear threatening, but they are actually quite harmless. The females are capable of stinging, but seem to prefer flying away rather than attacking humans. Giant resin bees are a different species than the Africanized "killer" bee, so there is no chance that the two species will interbreed.

Visit Virginia Cooperative Extension: ext.vt.edu

Virginia Cooperative Extension programs and employment are open to all, regardless of age, color, disability, gender, gender identity, gender expression, national origin, political affiliation, race, religion, sexual orientation, genetic information, veteran status, or any other basis protected by law. An equal opportunity/affirmative action employer. Issued in furtherance of Cooperative Extension work, Virginia Polytechnic Institute and State University, Virginia State University, and the U.S. Department of Agriculture cooperating. Edwin J. Jones, Director, Virginia Cooperative Extension, Virginia Tech, Blacksburg; M. Ray McKinnie, Administrator, 1890 Extension Program, Virginia State University, Petersburg.

2020

444-206 (ENTO-358NP)