

## Wool Carder Bee



A female wool carder bee collecting fibers from lamb's ear; courtesy of Lloyd Davidson, Ph.D., [ldavids@northwestern.edu](mailto:ldavids@northwestern.edu),

The wool carder bee, *Anthidium manicatum*, is a species of European leafcutter bee that has successfully colonized North America. However, North America isn't the only place these bees have invaded. They are now found in north Africa, South America, Asia the Canary Islands and even New Zealand.

This bee was introduced into the U.S. from Europe some time in the early 1960's. It was first discovered in New York State but has rapidly spread throughout North America since then. The first California collection was in the early 2000's and the bee had reached Davis by 2007.

Wool carder bees are roughly honeybee-sized but unlike honeybees they are brightly marked with yellow on a black background. Males are considerably larger than females, and have a spine on either side of the last two abdominal segments and three on the last segment, with a bright yellow face. Despite tales on the Internet these are not stingers, only female bees have those.

Males are aggressively territorial and as soon as they are mature they start patrolling territories that include plants visited by females. Territorial males will attack other bees, flies and even small birds, like hummingbirds. Males have been observed killing foraging honey bees but this is simply part of their territorial behavior and is unlikely to affect honey bee populations. They will also check out humans, flying

up to them and hovering.

Females are less obvious than males. They are smaller with a hairy face. They build their nests in existing cavities in rotting wood or even walls, and use fibers to line and partition their nest cells. They visit a variety of flowers for nectar and pollen but will also visit plants to collect hairs. Wool carder females are particularly fond of lamb's ears (*Stachys byzantina*) and as a result this is often where males will be found. They use their jaws to scrape, or card, the hairy leaves to collect fibers. Females can be pretty entertaining if they decide that exposed socks are good sources of fibers too.

Females build at least one nest per season, but only one generation a year. Although wool carder bees belong to the family of bees often called leaf cutter bees they do not cut leaves to use in their nests. They partition preexisting above ground tunnels with fibers into individual cells. Each cell is provisioned with a mixture of pollen and nectar. They tend to favor flowers in the mint family for collecting nectar and pollen. The female lays an egg on the ball of food and closes the cell, moving on to the next one.

There are native species of *Anthidium* but none are as large bodied as male wool carder bees. The native species are also unlikely to be found in gardens and decorative plantings, like the wool carder bee.



Wool carder bee. Photo courtesy of Kathy Garvey.