

DIG THIS By Peg Tillery (for 2-16-05) Time for Mason Bees © 2005

Orchard mason bees are one of nature's most prolific fruit tree pollinators. Today's column offers information about these fascinating creatures. For a mason bee house plan send a self-addressed envelope to Kitsap Extension, 345 Sixth Street Suite 550, Bremerton WA 98337-1874 with the words "mason bees."

Studies done by the Wytheville County Virginia Extension Office show that mason bees have a pollination success rate of 95 plus percent compared to honey bees at a 3 percent pollination success rate; mason bees are the earliest pollinators emerging at 50 degrees which is also when apple blossoms accept pollination and home and orchard gardeners need only 250 mason bees to pollinate an acre of fruit compared to 60,000 honeybees to do the same job in the same amount of time.

You may want to build your own mason bee house. Start with 4x4 or 5x4 blocks of wood at least 7 inches long. Use untreated fir, pine or hemlock. Use dry wood to avoid splitting when drilling. The most critical factor is that the bees need 5/16-inch (or slightly larger) holes to attract females, the most important pollinators and the baby makers. Each year the bees need clean holes. Drill holes from front to back all over the wood block stopping each time within ½ inch of the back. Add a shingle for a roof to keep rain off the front of the block. Cut your wood block on a slant and mount the shingle on the slant to make a clever mason bee condo.

If you build it they will come. Late February and early March is time to put up mason bee houses. Place the houses near fruit trees or on the side of a building where it will ideally get morning sun. Some gardeners encase their mason bee houses in mesh to deter Flickers feeding on the contents of the houses.

Mason bees don't make their own holes, they nest in leftover nesting holes of beetles and other insects, and even nest in hollow stems. Males emerge first in the spring (usually March) with the sole purpose of waiting for the females to arrive. Males exit the nest 3 or 4 days before the females offering a meal for any waiting predators. Enough survive to mate with the females. The females are bigger (they need stamina and strength for their work ahead) and are also slower so the males can catch them and have their way with them. In about two weeks the males die and then the females begin provisioning the egg tubes and laying eggs.

From March through June female mason bees spend their whole lives finding a hole, filling it with rich nectar and mud, laying an egg, and next sealing up each egg and nectar-rich packet with mud. Thus the "mason" name. Females gather up pollen and nectar to regurgitate on top of the cement-mud plug (protection from predators). She backs into the hole to lay a small white egg and then sleeps in the hole for the night while growing another egg in her body. She'll repeat the cycle each day for about thirty days. Each segment in the tube-shaped hole is called a cell. Each cell takes 8-12 mud-collecting trips and the provisioning with pollen and nectar takes 14-35 trips. Females pre-select the

sex of the eggs they lay. They fill the back end of the hole with eggs to yield females and finishing the hole off with eggs to yield males. In the spring when the males emerge they become a bee sacrifice to waiting predators. Two-thirds of the eggs laid are male. Each female lays about 35 eggs and then dies.

While our bee is doing her nesting thing, the eggs she's laid start an amazing transformation. Mason bee expert Brian Griffin (Knox Cellars www.knoxcellars.com) describes it as changing from egg, to tiny larva, like the original egg, except that it descends into the food source with an eating end attached to the food. Over 28-29 days the food disappears and the larva gets larger. When the food is gone the larva starts weaving a hard cocoon around its shape. This cocoon protects the forming bee during the long, cold winter ahead. Inside the cocoon a pupa shape forms. Griffin describes it as an "insect mummy." By September a fully formed adult bee lies asleep in the cocoon to wait until spring when the whole process starts again. Remember to place your mason bee houses in a cool, dry garage for the winter.

Remember the free Septic System Landscaping and Information Workshop at the 4th Floor WSU Classroom at the 345 Sixth Street (Norm Dicks Government Center) today from 1-3 p.m.

Contact Peg in care of this newspaper or email ptillery@co.kitsap.wa.us or gardenmentor@yahoo.com