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Three years ago I wrote about Orchard Mason Bees and the two columns were extremely popular. I thought readers might like to revisit the world of these fascinating creatures.

Mason Bees are the first bees to emerge and pollinate in March. Mason Bees begin pollinating when temperatures reach 50 degrees. Studies by the Wytheville County, Virginia Cooperative Extension Office say, “Mason Bees have a pollination success rate of 95 plus percent compared to honey bees at a three percent pollination success rate. Fifty-degree temperatures when Mason Bees emerge is also when apple blossoms accept pollination. 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.” That’s quite an amazing feat.

Mason Bees live solitary lives except for mating. They’re smaller than honeybees and look like black flies with four wings instead of the fly’s two. In the wild Mason Bees nest in the leftover nesting holes of beetles and other insects. They’ll even nest in the hollow stems of plants. Mason Bees don’t excavate their own holes, depending on others for a hole to nest in.

Males emerge first in the spring with the sole purpose of waiting for the females to arrive. This activity begins in mid March. Males exit the nest three or four 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 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, then sealing each egg and nectar-rich packet with mud. This cement like mud made by the female is how she got her name. After each egg laying and sealing up the female rests overnight and then begins the process again until the tube is filled up with nectar, mud and eggs. She’ll continue for about thirty days.

Each packet of nectar, mud and egg is called a cell and takes eight to twelve mud-collecting trips and the pollen collecting takes 14-35 trips. Females pre-select the sex of the eggs they lay. The safer back end of the hole is filled with females and then finished off with males at the end of the hole. Two-thirds of the eggs are male. Each female lays about thirty-five eggs and dies.

While our bee is doing her nesting thing, the eggs start an amazing transformation. Brian Griffin in his book, “The Orchard Mason Bee,” describes the transformation 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 calls it 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.

Brian Griffin of Knox Cellars in Bellingham introduced Mason Bees to our Northwest gardeners several years ago. His book “The Orchard Mason Bee,” available locally at bookstores, libraries and nurseries is full of tips and lore. You can also go to <http://gardening.wsu.edu> and key in “Orchard Mason Bees” to find a plethora of information and links for more information on these incredible creatures.

If you build or buy Mason Bee houses make sure to protect the houses from predatory flickers and other woodpeckery birds. Some gardeners protect their houses with wire cages. Start building your Mason Bee houses in February getting ready for March to await the homesteading Mason Bees. If you build it they will come.

Call the WSU Cooperative Extension Office at 337-7157 or email me at ptillery@co.kitsap.wa.us to receive a plan for building your own Mason Bee house.