

Leafcutter Bees **by Lloyd Eighme, retired entomologist**

You may have wondered what insect cuts such neat circles from the edges of leaves on your rose bush. It makes the leaves look a bit ragged, but I hope you will forgive the little leafcutter bees that do that because they are some of our best pollinators. We need all of the insect pollinators we can get since honeybees are not as abundant as they used to be. The leafcutter bees are in the same family (Megachilidae) as the orchard mason bees that use mud for their nest, but we hear a lot about the Orchard Mason bees, so we will skip them and take a look at the other bees in their family.

Leafcutter bees are active from early spring to late summer, so their pollinating activities are valuable to many different flowering plants, whereas the orchard mason bees live only a few weeks in the spring, sometimes completing their work even before all of the apple trees have bloomed. Our native leafcutter bees are never very abundant. They do not live together in colonies. Each female must search out a small hole or cavity in which to build a nest. I have seen them using the unfilled holes in the nest blocks I put out for orchard mason bees. Some people have complained about bees building their nests under and between shingles on the house or in the grooves of the wood siding. A few of these nests have been brought to the clinic and they are obviously the work of leafcutter bees.

The female leafcutter bee uses her scissor-like mandibles (jaws) to cut nearly perfect circles 1/4-1/2 inch in diameter out of the edge of a leaf. She pushes these circles into the nest hole to form the end of a brood chamber. Then she cuts oblong pieces of leaf that she rolls up like a short tube to form the walls. She gathers pollen and nectar from blossoms and stores enough in the cell to feed one larva that will hatch from the egg she lays there. Then she cuts more leaf circles to close that chamber and serve as the bottom partition for the next chamber. She will continue making leaf cells until the tube is filled. A three inch hole may have six cells, each with one egg. After the larva is fully grown it spins a soft silk cocoon in which to spend the winter as a pupa and emerges as an adult bee next spring.

The alfalfa seed growers in eastern Washington learned many years ago that our resident leaf cutter bees are much better pollinators of alfalfa blossoms than the honeybees. They tried many ways to increase the bee populations such as drilling holes in fence posts and barns until a bright (or lazy!) graduate student thought of using drinking straws in nest boxes for the bees. The increase in production of alfalfa seed per acre was phenomenal and you can still see nest boxes of straws in the alfalfa fields at blossom time.

Some master gardeners have collected bees and brought them to me for the insect collection and we have several kinds there for you to look at. I am sure there are many more kinds in Skagit County that we do not have as yet. We need to protect and encourage these valuable pollinators in every way we can. If you see some of these little bees at work and can collect a specimen (do not take very many!) bring them to me so we can discover what we have. Do not put bee specimens in alcohol, just put them in the freezer to kill and preserve them. Once we discern what kinds of leafcutter bees we have in Skagit County then we can determine what flowers they are pollinating and hopefully find ways to help them increase their population.



Leafcutter Bee
Lines nest with leaves