

Importance of Native Bee Pollinators

Native pollinators have evolved with native flora over millions of years. They are adapted to local climate and soils. Unlike the European honeybee, native bees do not require management by humans. They only need a natural, pesticide-free environment that provides food, shelter, nesting sites, and water.

There are 4,000 native bee species in North America and they are the most important group of animal pollinators. The majority are ground nesters including bumble bees, squash bees, cellophane bees, sweat bees and mining bees. A few are cavity nesters that nest in hollow plant stems, canes or pre-existing tunnels in dead trees and logs. Cavity nesters include mason bees (orchard bees), leafcutter bees, carpenter bees and yellow-faced bees.

Native bees pollinate 80% of all flowering plants. With honeybees, they pollinate 75% of fruits, nuts, and vegetables. In New England, native bees pollinate apple, plum, cherry, raspberry, and many flowers, trees and shrubs.

Our native pollinators also support plants in providing food and cover for wildlife, preventing soil erosion, keeping waterways clean, and producing the air we breathe.

Native bees are the most effective pollinators in part because of their body structure. Just like flying dust mops, pollen clings to hairs on their bodies and is easily brushed off. In this way, flowers are pollinated more completely. Native bee behavior also plays a role in effective pollination. Unlike honeybees, native bees are willing to fly when it is cold and damp. And while honeybees will visit a single fruit tree, methodically going from flower to flower, many orchard bees, for example, fly from tree to tree resulting in cross-pollination needed for some trees to set fruit.

Bumble bees are our only truly social native bee, living in colonies with a queen. They pollinate many important food crops. When other pollinators are inactive due to cold temperatures, bumble bees are able to shiver to warm their flight muscles. This allows them to fly in cool temperatures, even in light rain. Bumble bees are highly effective pollinators due to a specialized adaptation called “Buzz Pollination” which allows them to shake pollen loose from a flower.

Most native bees live a solitary lifestyle and like the social bumble bee are very effective pollinators. Some bees, like the squash bee, specialize on certain plant families. These bees emerge in time for plant bloom. Squash bees pollinate cucumber melon, squash, and gourds. Mason bees arrive early to pollinate apple, pear and other fruits. The vast majority of bees are generalist pollinators, foraging on a variety of plant species.

