Solitary Native Bee House Notes

Mount your bee house 5-7 feet above the ground on a sturdy support like a fence, building, or firmly planted post to prevent movement in the wind. The location should not be by where people walk regularly and might discourage bee traffic. It should face Southerly as close as possible to maximize warmth from the sun and be shielded from direct rain and snow. The house should have a sloped overhang of a couple of inches for some protection against direct precipitation, and to shed water.

Solitary native bees vary greatly in size. The bigger the bee, the larger the diameter and greater depth they require for their nesting hole. Holes can range from 1/8" to ½" in diameter and should be spaced about ½" to ¾" apart. If you build a house from scratch, take care to drill the holes straight and parallel to each other to avoid having them intersect. Smooth out the openings with sandpaper if there are any sharp splinters left by the drill. The contents of this house were fitted together as tightly as possible but not glued together, allowing used components to be cleaned or removed and replaced each year as needed to prevent the spreading of bee diseases. (*next page)

- Holes larger than ¼" diameter should be 5" to 6" deep.
- Holes ¼" or smaller should be 3" to 5" deep.
- Holes too shallow promote a greater than ideal ratio of male to female bees.

Solitary bees do not hive, swarm, or produce honey; and rarely sting! They live to pollinate and reproduce. They seek a suitable tube-like nesting place; collect pollen to make a pillow deep in the hole; lay an egg on the pillow; seal off that chamber; and repeat until the tube is full. (Cross-section photo below.) Larvae feed on the pollen when it hatches and pupates through the Winter. If all goes according to plan, fully developed young adult bees will emerge in Spring. With 1000+ species in Colorado, emergence will occur over a period of weeks.

Figure 47. This bee hotel illustrates several desirable design features: a generous roof overhang; mesh covering to exclude birds; nest blocks of different shapes and depths; and placement on a larger structure to help bees distinguish it from natural surroundings.

* **Updated advice received from an expert:**

Since different species emerge at differing times, some late-emerging adults may just be leaving their nest holes while other earlier-emerging species have already been hard at work with a new round of nests in nearby holes. Therefore, the only good time to ‘clean’ a house or replace sections thought to be used and vacated will be late Spring through Summer . Thus, the safer approach is to ‘retire’ and replace the whole thing.

Retiring the old house: In early-to-mid-April move the old house down to a spot near the ground (but high enough to avoid moisture intrusion from late Spring snows) on the same post or fence and hang a new one above it in the original location. As remaining bees emerge from the old house, they will naturally migrate upward to lay eggs in the new house.

Theoretically, the old house shell could be emptied of its material later in the Summer or Fall and refilled with similar 6-7” lengths of branches, scrap lumber, and bamboo tubes. In this manner 2 houses could be rotated each April for several years.

Graphic representation of the wide variety of bee sizes