Experimental Butterfly Hibernation Box

Plan 21 (page 55)

There are 10 kinds of butterflies in the 48 contiguous states that hibernate in or near their normal breeding areas.

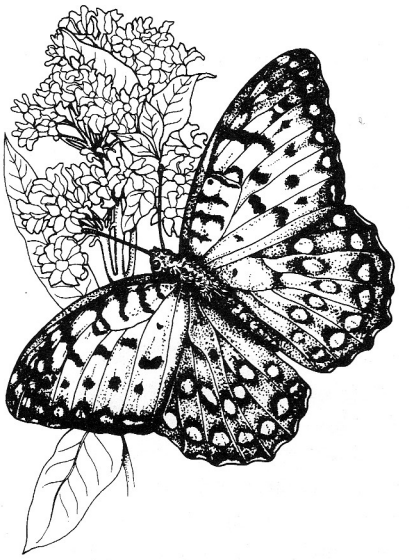
Each of these species seeks out crevices, holes, tree bark, wood piles and similar places to hibernate. Not every neighborhood has what it takes, so landscapers install butterfly boxes. This has become so popular that few garden centers are without attractively designed butterfly boxes.

Unfortunately, enthusiasm and aesthetics have replaced science. The need for or use of butterfly hibernation boxes has yet to be proven. Penn State entomologists note that few if any of these boxes are ever used. Some manufacturers market cedar boxes. Cedar is an insect repellent. A butterfly will struggle to get out of such a box.

For these reasons we consider the use of butterfly boxes as experimental or aesthetic at best.

Butterfly boxes are designed to simulate natural crevices. For this reason, loosely place material such as coarse pine bark mulch or strips of tree bark inside the butterfly box. Place the material vertically to allow butterflies ease of entrance. The box should be full, but with plenty of butterfly-sized crevices.

Mount the box 3 to 4 feet high on a pole or post. Place it around trees, preferably in shade.



Regal Fritillary

Solitary Bees (Orchard Mason Bees)

Plan 22 (page 56)

Nationwide, wild and domestic bees have been in decline. These are extremely valuable pollinators that we can't afford to lose. To help focus attention on their plight, we've included a solitary bee nesting block.

The Orchard Mason Bee is one of many species of solitary bees that are found across the United States. They are commonly found in wooded areas, but frequent backyards, looking for early spring flowers. This "fat, fuzzy, midnight blue insect" is non-aggressive. It's slightly smaller than a honey bee, yet it is a powerful pollinator of yearly blooming crops like apple, cherry and pear.

It's a native species and better adapted than the honey bee for flying in cool weather or even light rain. Good pollination in a commercial apple orchard can be achieved with as few as 250 female Orchard Mason Bees per acre.

Like Purple Martins, Orchard Mason Bees are colonial nesters. A population increase can be expected every year simply by adding more blocks to the colony. This presumes adequate forage is available nearby.

A mud plug is evidence that a 3" deep nest hole contains 4 to 6 eggs, each in its own "cell." By September each cell contains a mature bee.

Nesting blocks should be in place by the first week in March. Do not handle blocks with mud plugs again until late September. At this time they can be moved into an unheated barn or shed to keep them dry. Do not place them in a heated space as the bees will emerge too early and starve.

Several cautions are in order: "Managing" solitary bees is in its infancy. We have a lot to learn. We do know that nests are delicate and larvae are easily killed. So no handling until late September. Like most insects, they cannot tolerate many of the chemical sprays used for agriculture or lawns. If there's no nearby food source, they will leave orchards after the bloom is past.

The information in this account was excerpted from an article in the May 1995 issue of *Bee Culture* by Brad Gill.