

Mason Bee Cocoons

Mason bee larvae spin a strong, insulated, pinkish colored, weather- and water-proof cocoon. Metamorphosis is completed in September when the pupa molts and becomes an adult bee. The adult bee safely hibernates in the cocoon over fall and winter.

Cocoon size varies based on weather, availability of pollen and nectar, and the diameter of the nest cavity. Each cocoon has a nipple-like bump at the front end, surrounded by silk thread.. Cocoon nipples usually face toward the nest entrance. The length of a female cocoon is .5 to .6-iches, while the male cocoon is slightly smaller at .4 to .5 inches long.

Harvest cocoons and clean mason bee nests between October and December. Remove dried mud, fecal matter, cocoon debris, mites, parasites and dead bees from nesting. Mason bees prefer clean nests over old dirty nests. Clean nest management ensures healthy and bountiful mason bee populations.

A four-tunnel wood scraper speeds up stacked tray, or Binderboard, nest cleaning. These practical scrapers are available from Pollinator Paradise.

“Cleaning cocoons is important in the Pacific Northwest,” according to Karen Strickler, PhD, of Pollinator Paradise, “where hairy-fingered mites build up in a few years. The first year or two that someone works with the bees, the mites usually aren’t that bad.” Strickler recommends “beginners start with liners in clean wood nests or clean guard tubes.” Check for mites after two years.

Washing cocoons is time consuming, yet easy. Allow ample time to perform this needed maintenance.

Detailed information on cocoon cleaning and storage can be found in the book “Pollination with Mason Bees,” by Dr. Margriet Dogterom, PhD; or on the website video of Pollinator Paradise.

Highlights to keep in mind when cleaning cocoons:

(1) Soak empty nesting trays in warm water to soften mud. Remove nesting trays from the water, and use a scrub brush to remove mud and debris sticking to the nest.

(2) Kill bacteria and fungi with a mild bleach solution. Add one tablespoon of laundry bleach to one gallon (16 cups) of water...

(3) Harvesting cocoons allows for examination, identification, and removal of diseased, infected, and under developed cocoons; leaving only healthy cocoons.

(4) Minimize cocoon exposure to indoor temperatures during harvesting and cleaning to prevent premature emergence. Only two to three hours at 68-degrees Fahrenheit, or room temperature, is needed for male mason bees to emerge.

(5) Cocoons may be safely layered no deeper than two to 3-inches. More than this will crush cocoons underneath.

(6) **CAUTION:** Never use detergent or soap to clean cocoons. These will be absorbed by the cocoon, and kill the adult bee inside.

(7) **DO NOT** recycle the muddy debris from cocoon cleaning. It may contain parasitic mites. Discard the sludge in the garbage.

(8) Mites are reddish in color. Two washings are usually needed to remove them.

(9) Be sure cocoons are adequately air dried before winter storage. Mold grows on wet cocoons, possibly destroying them.

(10) Sufficient air circulation is necessary during storage to prevent cocoon deterioration

(11) Do not place mason bee cocoons for storage in a frost free refrigerator. The humidity is too low for them to survive.

(12) The best conditions for cocoon storage is a clean, dry environment where the ambient temperature is between 36 and 39 degrees Fahrenheit.

Bee Diverse (www.beediverse.com) sells orchard mason bee cocoons between November 1, and February 15, in “light-proof” plastic vials. Ten healthy cocoons are in each vial. Special “cool packs” protect cocoons shipped after mid January.

Emergence, or release, shelters are offered by both Bee Diverse and Pollinator Paradise. One hundred to 200 cocoons may be safely stored in these well-constructed wood shelters. The “Loose Cocoon Emergence Drawer” is available at Pollinator Paradise, while two different “Emergence Shelters” may be obtained at Bee Diverse.

Pollinator Paradise (www.pollinatorparadise.com) offers both orchard and horn-faced mason bee cocoons. Shipping begins in January. They also offer an X-ray and Cleaning Service to determine healthy bees, dead bees, sex ratio, pests, parasites and predators.

Mason bee cocoons may be set out and mass released, or stagger released every few weeks, to coincide with spring’s warm temperatures, and fruit and nut tree, as well as berry field blooms.