

Massachusetts Master Gardener Association

FACT SHEET



Have Gardening Questions? The **Master Gardener Help Line Hours** are 10 a.m. – 2 p.m. on Fridays (all year) as well as Wednesdays (March-November) and Mondays (April-October).
Phone: 617-933-4929 Email: mg helpline@masshort.org.

Bug Hotels

The Accommodations: Insect hotels are a great way to provide weather-protected homes to beneficial native insects. As payment, these insects will pollinate our crops and flowers and prey on garden pests. Designs of bug hotels vary depending on the type of insect(s) you wish to attract, but most can be made from materials found in your garden. Many insects are particular about nesting and overwintering, but with a little information, the gardener has a free hand in the creation of hotel “rooms.”

The Materials: Some suggested materials for a hotel include wooden boxes, plastic soda bottles, open bird houses, and cement blocks connected by planks of wood. They can also be purchased at garden centers or from gardening websites/catalogs.

The hotel should be divided into separate compartments which will vary in size and material depending upon the insects’ preferences. Compartments can be filled with a variety of found or recycled materials such as hollow reeds, bamboo, wood bark, wood chips, pine cones, drilled wooden blocks, bundles of sticks and twigs, bunches of straw, rotting logs, decaying plant matter, stems and dried grass. Unfortunately, beneficial insects may not be the only guests of the hotel. But if the good bugs have enough space, you can create a balance in your garden.

The Guests: Solitary bees, social bees, wood-boring beetles, ground beetles, ladybugs, dragonflies, moths, butterflies, hoverflies, spiders, lacewings and other beneficial insects.

Their Preferences:



Solitary bees (for example, Mason, Masked, Digger and Leafcutter) and wasps are attracted to holes drilled into wood to lay their eggs, as well as hollow stems like bamboo canes. Contrary to their name, they often group together in a stem, lay their eggs and seal off the opening using mud or leaf litter until Spring. Mason bees are superior pollinators of fruit crops.



Social bees (such as the Bumblebee and Honey bee) may not use the bug hotel. They prefer to lay their eggs in honeycombs constructed underground or around certain types of grass.



Ground-dwelling bees won’t need a hotel room. They will dig a little hole in the soil for winter hibernation. Bumble bees will nest in hollow trees and in rodent burrows. They, too, are superior pollinators.



Wood-boring beetle larvae will feast on rotting logs. These logs should be placed at the base of your hotel so they stay damp and mix with other decaying plant matter to attract centipedes (which eat slugs) and other insects like millipedes and woodlice (which will provide a source of food for birds). This is also a great spot for garden spiders.



Ground beetles like habitats made of twigs, sticks and stems of different size bundled together. These beetles eat pests on our crops, including aphids and carrot root fly larvae.



Ladybugs like to overwinter in dry plant material such as bundled twigs about 5-6 inches long and tied together. Large groups of ladybugs squeeze together until Spring when they will eat aphids and nuisance insects such as mites.



Butterflies and Moths: A series of vertical slots should be used as an entrance to a dry wooden space that is filled with vertical pieces of bark.



Hoverflies are both pollinators and pest patrolers – the larvae eat aphids while the adults feed on nectar as they pollinate flowers. They prefer bundled twigs and sticks.



Lacewings are one of the gardener’s best friends, dining on aphids and other pests such as scale insects and many types of caterpillars and mites. They need a room with straw and dried grass.

The Massachusetts Master Gardener Association is a non-profit organization whose mission is to share knowledge and experience with the public through outreach programs in education, horticulture and gardening; to provide the Master Gardener Training Program to interested members of the public; and to provide graduates of the Master Gardener Training Program with educational and practical opportunities to extend their knowledge and interests in gardening and related topics. <http://www.massmastergardeners.org/>

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Bug Hotels—*continued*

Logistics: Placement of the bug hotel in your garden will depend upon the type of insect you wish to attract. It should be near a source of water and close to their favorite plants so the insects will have an available food supply in the Spring.

A bug hotel designed to attract bees should be placed in a full-sun location, preferably facing east, and protected from the wind. Some insects, however, would prefer the hotel placed in a damp and partially-shaded location. All bug hotels should provide protection from wind and rain/snow.



Another consideration in placing the hotel is the bees. Solitary bees are unlikely to sting. They have no hive or nest to defend. However, other types of bees will sting if they fear danger to their homes/eggs. Keep this in mind. Once the hotel is inhabited, it should not be disturbed until the weather is warm and the nests are empty.



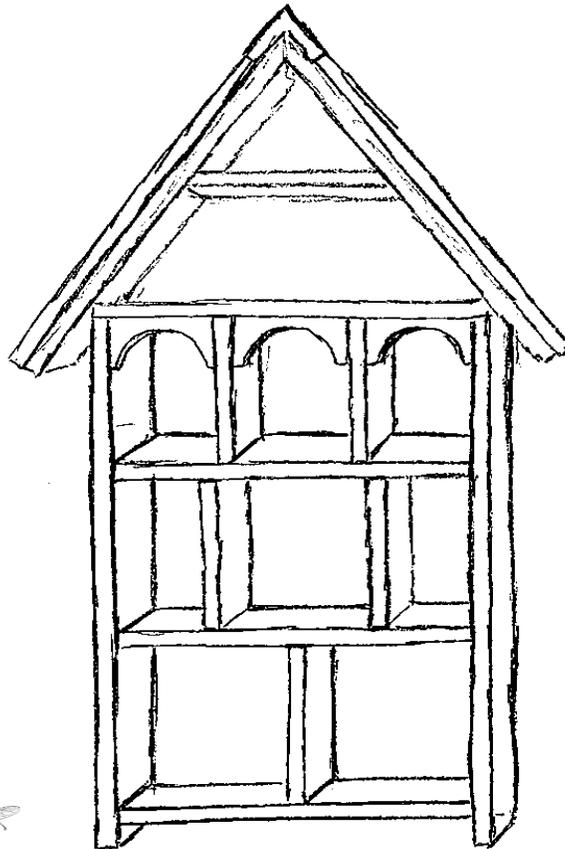
Before drilling “bee holes” in wood, it is important to remember that different bee species are particular about the sizes of holes they use for shelter and egg-laying. Leafcutter bees like holes that are 1/4” wide and 2 1/2 - 4” deep. For mason bees, drill the holes 6” deep and 5/16” wide. Try to space holes at least 3/4” apart, and never drill entirely through the wooden blocks.

Avoid paper and cardboard. If they get wet, they will disintegrate. Dried leaves will crack and interfere with the egg laying processes.



Metal screening placed over the compartments will prevent birds and other predators from eating the residents of the hotel. A woodpecker can mistake the hotel for a restaurant.

It is recommended that the materials in the hotel be replaced every two years to diminish the risks of disease and some uninvited guests like mites. Also, the rooms should be disinfected with a 5% bleach/95% water spray once the nests are empty.



Below is a diagram of the bug hotel designed by Master Gardener Paul Cook for the Boston Flower and Garden Show in 2015.

You can create your own bug hotel out of materials you have at home. It can be large like this one, or a small one made out of a wooden crate. See more examples at:

<http://gardentherapy.ca/build-a-bug-hotel/>

<https://www.youtube.com/watch?v=OR1ogpXvwy4>

<http://>

www.wildaboutgardens.org.uk/thingstodo/inaweekend/bug-mansion.aspx

<http://>

www.inspirationgreen.com/index.php?q=insect-habitats.html



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