

# Backyard Building

## Build a Bee Hotel



*Image Credit: Jean-Francois Kafer*

DID YOU KNOW? May 20<sup>th</sup> is World Bee Day!

According to the UN, Bees and other pollinators are in decline and that is bad news for humans and animals who depend on these busy workers to support our ecosystem. World Bee Day was declared in 2018 with help from the Government of Slovenia to highlight the importance of bees to our lives and to promote actions to protect them.

<http://www.fao.org/world-bee-day/en/>



# Facts about Bees

Get to know these buzzing VIPs with these fun facts!

- Bees are important to human survival on Earth. They pollinate 30 percent of all the food we eat. In fact, according to a recent UN report just 10 crop species provide 90 percent of the world's food and 70 percent if that is pollinated by bees.
- Alberta has 300 types of bees
- Bees are related to wasps and ants but only bees feed wholly on nectar and pollen.
- Bees can live in hives like honey bees or can live alone like a leaf-cutter bee.
- Only queen bees lay eggs
- Bees only sting when they feel threatened so approach slowly, keep your movements smooth, keep a respectful distance and don't come between them and their escape route.
- Check out this [guide](#) by the Edmonton and Area Land Trust to assist you in identifying bees in your neighborhood.

## Artists to investigate

Scientists, artists and designers have an interest in better understanding the behaviors of bees. Explore the work of two artists who are inspired by the lives of bees and incorporate their observations into the artwork they make.

### Wolfgang Buttress

Wolfgang Buttress is an English artist who loves bees so much that he makes larger than life hives to show people how amazing they are. His hives are made of wire and thousands of tiny LED lights. Each group of bees makes their own unique sound and so he records them and makes soundscapes out of them.

One of his most famous Hives is at Kew Gardens in England one of the largest Botanical Gardens in the world.

<http://www.wolfgangbuttress.com/soundscape>



## Aganetha Dyck



*Image Credit: Portraits: 9 Bees by Ananetha Dyck, AGA Collection, gift of the artist*

Ananetha Dyck is a Canadian artist, best known for her collaborations with honeybees, which include placing objects such as figurines into beehives. Overtime, the insects build honeycomb onto the objects and once the object has transformed, it is taken out and into a gallery! Since 1989, Dyck has worked closely with beekeepers and scientists to create these delicate sculptures and uses her acclaim to highlight environmental issues including what ramifications we may face should honeybees disappear from Earth.

In the artwork above, Dyck has created a portrait of bees using ink, beeswax, wax comb and propolis on canvas.

<http://www.aganethadyck.ca/>

<https://www.cbc.ca/arts/aganetha-dyck-reveals-how-she-works-with-bees-to-create-strange-and-wonderful-art-1.4597098>



# Your turn!

You can help and get to know the bees by designing and building a Bee Hotel!

Bee hotels attract tunnel-nesting solitary bees like Leaf-Cutters and Mason Bees. A range of sizes is good for biodiversity. The number of tunnels available in your bee hotel is up to you!

## Materials

Gather the following materials to start your bee hotel:



- A terracotta plant pot, wooden box, milk carton or can at least 150 mm deep plus a little bit of overhang to keep the tubes nice and dry in the rain.
- Various paper tubes (like paper towel rolls or toilet paper rolls), straws, plant stems or canes (use lengths of at least 150mm with widths of 4mm to 10 mm to attract a wide range of bees)
- Paper to roll your own tubes
- Something to roll the paper around (a dowel, bamboo stick or pencil)
- Cotton String or jute twine (optional: twist ties)
- Scissors
- Clay to seal up the tubes on one side
- Some ornamental pieces and scent free items to help the bees identify where they live. TIP: Bees like colours and orient themselves by using colourful landmarks.



## Procedure:

Let's get creative!



1. Prepare the nesting tube material (tubes, paper, plant canes, plant stems) by cutting it into 150 mm lengths. NOTE: When using plant canes, don't use plant canes where there is a knot or some obstruction in it. The bee might damage its wings or get stuck. Some good choices are: last year's Raspberry cane, Lovage, Aster, Rose, Echinacea, Sunflower



2. Take your papers and roll them into rolls of different diameters varying (between 4mm to 10 mm) preparing to stick them inside the paper tubes. As you roll, use twist ties, twine or tape (shown here) to keep them rolled until you have a bundle of four or five and slide them inside the tubes.



3. Seal the ends of your tubes with clay or fold them over and use tape or a stapler to prevent other insects from disturbing the eggs once inside.





4. Tie the filled tubes together with a piece of string to make those tubes as stable as possible and then insert your bundle of tubes inside your pot, carton or box.



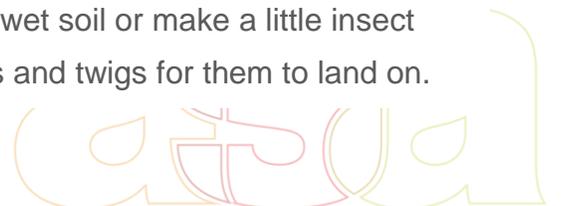
5. Hang your house near an early-blooming tree, shrub, or flower. Make sure the home is in the sun, at least 3 feet off the ground, and stable. The bees will not use a house that swings in the wind.



6. Watch daily to see when the bees move in. When the tubes are capped with mud and leaves means that your hotel is being used and that there are eggs inside!! Here is more information from the David Suzuki Foundation: <https://davidsuzuki.org/queen-of-green/choose-best-mason-bee-home-make-one/>

## Next steps

- Provide Mud Mason bees with mud to make their nests. If a source of mud is made available near the nest box it saves the bees a lot of time and energy. Keep a small patch of soil moist, fill a small bucket or tray with wet soil or make a little insect water feature by keeping a tray or dish with rocks and twigs for them to land on.



- After the bees finish nesting after the Summer, take down your house and put it in a safe place until next year. A cool, dry place, like an unheated garage, shed, or basement is perfect. The paper tubes are delicate and will likely collapse if left out year-round. Clean out the tubes or compost them and get ready for next Spring!
- Ready for the next step? Try building a Bee Skep!  
<https://modernfarmer.com/2013/05/how-to-build-a-bee-skep/>

## Resources

Here are some resources that helped us create this project, check them out for more information about bees and their building habits:

[https://www.edmonton.ca/documents/Bee-in-the-Know\\_Helpful-Bee-Tips.pdf](https://www.edmonton.ca/documents/Bee-in-the-Know_Helpful-Bee-Tips.pdf)

<https://www.ealt.ca/protecting-pollinators>

<http://www.fao.org/fao-stories/article/en/c/1127922/>

<https://www.albertanativebeecouncil.ca/bumblebee-box-program-1>

<https://www.keepingbackyardbees.com/meet-the-leafcutter-bee-zbwz1802zsau/>

[https://seeds.ca/pollinator/bestpractices/alfalfa\\_lcb.html](https://seeds.ca/pollinator/bestpractices/alfalfa_lcb.html)

[https://www.aussiebee.com.au/leafcutter\\_bee.html](https://www.aussiebee.com.au/leafcutter_bee.html)

<https://pollinators.msu.edu/publications/building-and-managing-bee-hotels-for-wild-bees/>

