

Native Bees in the Backyard

Why are Native Bees Important?

Imagine your day without a cup of coffee or a chocolate bar. Without the pollinating activities of native bees this could become a possibility. Native bees are one of the major pollinators of vegetables, fruits, and flowers. Unfortunately, their populations are dwindling due to increased use of broad spectrum pesticides and habitat loss and fragmentation. Misshapen tomatoes or cantaloupes that do not taste as sweet as they used to are observable signs that native bee populations are in danger.

How to Attract Bees to the Yard

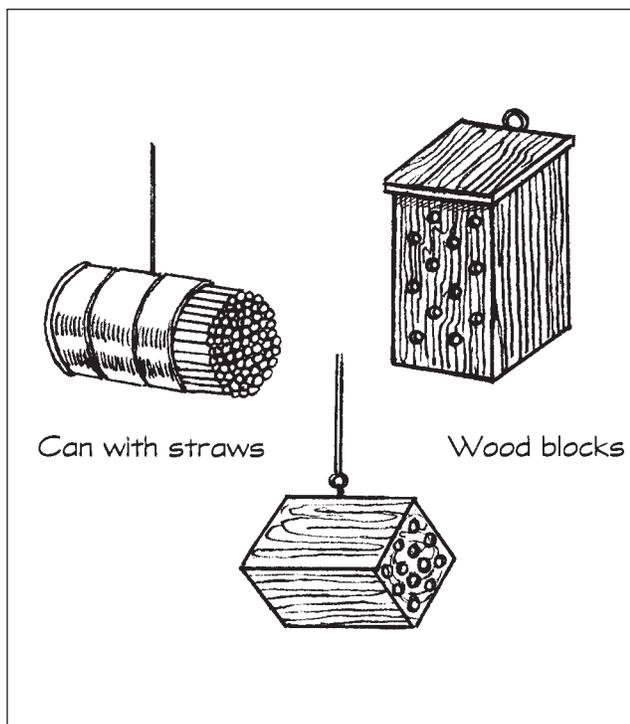
So what can a homeowner do to encourage native bees? First, you need to plant high producing pollen and nectar plants. Adult bees feed on nectar while pollen is harvested for the larvae. Modern hybrid flowers are developed for disease resistance and color. This means the flowers usually do not contain enough pollen and nectar to be desirable to bees. Therefore, plant native and heirloom plants and design your garden to include a succession of bloom from spring to fall. This keeps bees around before and after your vegetables are in bloom.

Secondly, provide a place for bees to nest. This can be done either by making the nests or providing the materials. Be sure to place materials or nests far away from decks, patios and playing areas. Don't place the nests in direct sunlight because the larvae will hatch too soon in the spring.

Last but not least, provide water. Bees need it for drinking and creating nests. Sources of water are ponds, bird baths, and dripping faucets.

How to Construct Bee Nests

Nests can be constructed from various types of materials, depending on the bee you want to attract. To create nests for stem nesting native bees, bundle together dried pithy stems or stuff coffee cans with paper straws. Suspend these bundles horizontally 5-6' off the ground. To attract orchard mason bees, use blocks of softwood (sugar pine) with drilled holes of varying sizes. Cover the front of the block with netting to prevent birds from eating the larvae. Mason bees and leafcutter bees use old beetle tunnels for nesting sites, so leave some stumps, dead branches and rotting trees laying around. Mason bees construct nest cells within the tunnels from mud. You can help Mason bees by creating a one foot conical mound of soil that has water seeping up from a pan at the base. The Mason bees will collect balls of mud to take back to their construction site.



Maintaining Bee Populations

Practice Integrated Pest Management to maintain healthy populations of native bees. IPM is a sustainable approach to managing pests by combining biological, cultural, physical and chemical tools to minimize economic, health, mental, and environmental risks.

For a homeowner that means monitoring pest levels in the landscape and only applying chemicals when it is crucial (at peak pest levels). It also means being selective in various ways.

- ◆ When choosing your pesticides, remember some are extremely toxic to bees, killing them almost instantly.
- ◆ Choose formulations that are not systemics or dusts. Systemics spread throughout the plants and up into the blossoms. Dust formulations cling to the hairs on the leg, abdomen, back and heads of the bees which in turn can be carried back to the nests.
- ◆ If pesticides are needed, apply them after sundown when most bees are not out. Apply the chemicals at recommended intervals.
- ◆ Do not spray directly on the blossom, where the bee will harvest pollen and nectar.
- ◆ Be cautious when applying lawn chemicals. They have the potential to harm ground nesting bees like bumblebees.

Native Bees up Close

Listed below are some characteristics of the native bees that you can attract to your backyard.

Note: Honeybees are not native, they were imported from Europe.

Carpenter Bee

They look like bumblebees, the difference is that the abdomen is shiny, black & bare without hairs. Males have white markings on their head and lack stingers. They are considered solitary bees. Be forewarned that this wood chewing bee can cause damage to wooden structures.

Blue Orchard Bee

They are iridescent blue (sometimes blue-green) and are smaller than a honeybee. They pollinate all kinds of fruit trees except citrus. Blue orchard bees are solitary.

Bumblebee

They nest in the ground or above ground in small colonies. Bumblebees are identified by the hairy, yellow & black stripes. Bumblebees are known for their buzz pollination of tomato, eggplant, and beans.

Squash Bee

These big solitary bees are orange-brown and between the size of a honeybee & bumblebee. Squash bees can fly in the dark and work in cloudy cool conditions (honeybees don't). They mainly pollinate pumpkins, squash and gourds.

Leafcutter Bee

They are black with white or silvery hairs and the top of the abdomen has bands of white hairs. They mainly pollinate legumes. Leafcutter bees are solitary.

PLANTS TO ATTRACT NATIVE BEES

Trees & Shrubs	Perennials	Culinary Plants/Misc.
Most fruit trees/shrubs	Milkweed	Tomato
Willow	Clematis	Eggplant
Tulip poplar	Purple/Yellow Coneflower	Strawberry
Flowering dogwood	Coreopsis	Squash/Pumpkin
Red maple	Daisy	Bean
Linden	Hollyhock	Oregano
Viburnum	Yarrow	Thyme
Witch hazel	Goldenrod	Mint
Andromeda	Cardinal flower	Clover
Hydrangea	Bee balm	Melon
Butterfly bush	Lily of the Valley	Sunflower
Rhododendron Azalea	Blue scabiosa	Scarlet runner bean

References

<http://gears.tucson.ars.ag.gov/nabgarden.html>

Jesiolowski, Jill. "Get Bugs to Boost Your Yields". Organic Gardening, May/June 1996; pg 28-35.