Attracting Native Bees to Your Garden

Liz Cardinal
Sustainable Food Center
OUR MISSION

To cultivate a healthy community by strengthening the local food system and improving access to nutritious, affordable food.
SHARE

- SFC Farmers' Markets
- Community and School Farm Stands
- Double Dollars on SNAP, WIC, FMNP
- Farm to School and Farm to Work
- Farmer Advocacy
PREPARE

• Affordable cooking classes
• Free cooking class series for those who qualify
• Private group cooking classes
• Company team building experiences
- School and community garden leadership trainings
- Food gardening classes
- Free gardening resources and classes for those who qualify
- Teaching Garden field trips and tours
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Why bees?

- Play major role in agricultural systems
- Help pollinate our teaching garden
- Reduce fear of bees
- Increases awareness of the importance of honeybees as pollinators, and encourage gardeners to incorporate bee-friendly plants in their home, community, and school gardens.
Teaching Apiary

- Two top bar hives and one Langstroth hive tended by professional beekeepers
- Offer classes on backyard beekeeping
- Beekeepers keep excess honey
Native bees have two basic needs: food in the form of nectar and pollen from flowers and a suitable place to nest and lay eggs. (and no pesticides!)
Other Pollinators

- Wasps
- Hummingbirds
- Butterflies and moths
- Others?

But, they do not collect pollen....
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Honeybees

- Brought to America around 380 years ago by European colonists.
- Well-documented decline since the 1950’s as a result of agricultural intensification, disease, parasites and pesticides.
- Responsible for pollinating around 400 agricultural crops globally.
- They are an agricultural animal.
- The colony is a superorganism with a caste system.
- Hives can be moved and managed for pollination.
- Produce honey.
- May compete with native bees for nectar sources.

Native Bees

- 90% are solitary with individual females establishing and provisioning nest sites.
- Evolved with the native flora and fauna
- More effective at pollination
- Keystone species - essential to reproductive cycle of most flowering plants that animals rely on for food and shelter
- Species of conservation concern

What's the difference?

- All bees exhibit flower constancy; they visit one particular plant species while foraging = super pollinators!
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WHY BEES?

ABOUT SFC

Honeybees vs. Native bees

Types of Native Bees

Attracting Native Bees
Types of Native Bees

You might see some of these busy bees

**Sweat Bee**
Some social, some solitary
Nest in underground tunnels

**Mason Bee**
Nests in hollow stems or holes in wood
caps each cell with...?

**Leaf Cutter**
Nest in hollow stems or holes
caps each cell with...?

**Bumble Bee**
Social bees, living in colonies
Nest in dry cavities
First bees active in spring, last bees active in fall

* 70% of North America's native bee species are solitary ground nesters
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Nesting sites

70% are ground nesters - they need access to the soil surface. Sandy or loamy soils are preferrable to rich soils. An undisturbed landscape is the simplest approach.

Tunnel nesters need hollow stems, snags or natural tubes (smooth) 3" - 6" long. Wooden nest blocks, bamboo bundles, or combination "hotels". Keep dry and predator-safe.

Construct wooden bumble bee boxes or preserve cavities like old rodent nests.
Provide habitat for native bees

Leave ground nesting sites undisturbed

Leave dead wood for nesting tunnels

Incorporate hollow tunnels
A diversity of plants, preferably native

Provide overlapping bloom times for foraging throughout seasons.

Native flowers provide best sources of nectar and pollen.
  - salvia
  - gregg’s mist flower
  - zexmenia
  - aster
  - evening primrose

No pesticides or herbicides

Provide a water source

Create a 'pollinator garden' area
Native Plants

Esperanza

Zexmenia

Fall Aster
Flowering Plants

Zinnia

Hollyhock

Larkspur

Sunflower
Vegetables & Fruits

Squash
Cucumber
Artichoke
Apple
Herbs

Basil

Fennel

Cilantro
Shelter

When hibernating, dormant or overwintering, bees need safe, undisturbed sites.

- Don't tidy up your yard too much
- Cover or move bee habitat

Fall Garden
Xerces Society Blog
Pesticide-free landscape

Control weeds and pests by hand

Use organic pest control
  • neem oil
  • garlic-pepper spray

Invite beneficial insects and allies
  • birds
  • chickens
  • predatory wasps and beetles

Maintain healthy soil

Be an attentive gardener