

## WHAT IS A POLLINATOR?

Pollination occurs when pollen is moved within flowers or carried from flower to flower by pollinating animals such as birds, bees, bats, butterflies, moths, beetles, or other animals, or by the wind.

### Why are pollinators so important?

Examples of crops that are pollinated include apples, squash, and almonds. Without the assistance of pollinators, most plants cannot produce fruits and seeds. The fruits and seeds of flowering plants are an important food source for people and wildlife.

### Are bees the only insect pollinators?

NO! Insect pollinators include bees, (honeybees, solitary species, bumblebees); pollen wasps (Masarinae); ants; a variety of flies including bee flies and hoverflies; lepidopterans, both butterflies and moths; and flower beetles.

**What insects can pollinate plants?** There are many important pollinating insect species in the orders:

Hymenoptera (bees, wasps, and ants)

Lepidoptera (butterflies and moths)

Diptera (flies) Coleoptera (beetles)

### How does a bee pollinate a plant?

Bumble bees start the pollination process without even realizing it! When bees land on a flower, like the milkweed flower, their feet often slip into a little groove that holds pollen sacs. When the bee flies away it carries off this sac like a saddlebag stuck on its feet.

### Do you need bees for tomatoes?

While tomato flowers are typically wind pollinated, and occasionally by bees, the lack of air movement or low insect numbers can inhibit the natural pollination process. In these situations, you may need to hand pollinate tomatoes to ensure pollination takes place, so your tomato plants bear fruit.

### What is a pollinator friendly landscape?

Plants- - plant a wide variety of plants that bloom from early spring into late fall -

planting in clumps, rather than single plants. -include plants that are native to your area (Natives are adapted to your local climate, soil and native pollinators). Do not forget that night-blooming flowers will support moths and in tropical areas even bats.

### **Help Pollinators! Eliminate pesticides whenever possible!**

If you must use a pesticide, use the least-toxic material possible. Read labels carefully before purchasing pesticides, as many are especially dangerous for bees. Use the product properly. Spray at night when bees and other pollinators are not active.

### **Do animals pollinate flowers?**

Yes! Some mammals are pollinators whereby pollen is transferred by vertebrates, particularly by hummingbirds and other birds, and bats, but also by monkeys, marsupials, lemurs, bears, rabbits, deer, rodents, lizards and other animals. Animal pollinators play a crucial role in flowering plant reproduction and in the production of most fruits and vegetables. Most plants require the assistance of pollinators to produce seeds and fruit. About 80% of all flowering plants and over three-quarters of the staple crop plants that feed humankind rely on animal pollinators.

### **Mason Bees**

Of the 4,000 bee species in North America, The Mason Bee is a very productive pollinator for spring flowers, fruits, and nuts. The female carries pollen on the underside of her hairy abdomen, and then scrapes the pollen off within her nesting hole. Because the pollen is carried dry on her hair, it falls off easily as she moves among flowers.

### **Help counter negative effects of declining honeybee colonies.**

You can build up wild bee populations! **Build a Mason Bee House!** Mason Bees work more extensively as orchard or field pollinators and could be an important step in ensuring that some of our most nutritious foods, like almonds, melons, and blueberries, continue to be readily available, high in quality, and affordable.

### **Mason Bee House Instructions!**

With drill bits of various sizes (5/16th of an inch works best for Mason bees) simply take some scrap lumber and drill holes 3 to 5 inches deep but not all the way through the wood block. ... You can cover the holes with chicken wire to help keep birds away from the bee house.

## **Bird Pollinators**

Most bird pollinated flowers are red and have a lot of nectar. They also tend to be unscented. Flowers with generalist pollinators tend to have diluted nectar but those that have specialist pollinators such as hummingbirds or sunbirds tend to have more concentrated nectar.

After dark, moths and bats take over the pollinator night shift. Bats are very important pollinators in tropical and desert climates. Most flower-visiting bats are found in Africa, Southeast Asia, and the Pacific Islands. Two species of nectar-feeding bats, the lesser long-nosed bat and the Mexican long-tongued bat, migrate north a thousand miles or more every spring from Mexico into Arizona, New Mexico and Texas. Both are listed as federally endangered species.

## **What is a bumblebee?**

A bumblebee is an insect pollinator. Like their relatives the honeybees, bumblebees feed on nectar, using their long hairy tongues to lap up the liquid; the proboscis is folded under the head during flight. Bumblebees gather nectar to add to the stores in the nest, and pollen to feed their young. They forage using color and spatial relationships to identify flowers to feed from. Some bumblebees rob nectar, making a hole near the base of a flower to access the nectar while avoiding pollen transfer. Bumblebees are important agricultural pollinators, so their decline in Europe, North America, and Asia is a cause for concern. The decline has been caused by habitat loss, the mechanization of agriculture, and pesticides.

The **Master Gardener Hotline** is open from April to October, Monday through Friday. Lines are available 9:00 am to noon and 1:00 pm to 4:00 pm at 888-678-3464

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