



# Pennsylvania Pollinator Series



## Pollinator Friendly Garden

*a serious threat to honeybees and, consequently, to a third of our food supply, Colony Collapse Disorder is one of the most publicized decline threats to a pollinator species. Unfortunately, dozens of other keystone pollinator species are either in decline or becoming extinct. Gardeners like you can make a significant ecological difference by providing pollinators with nesting and foraging habitat. This publication seeks to provide insight into the mutual relationship between pollinators and flowering plants, as well as educating environmental-minded citizens on how to be better stewards of the pollinators in their gardens.*



Source: S. G. Goodrich *Animal Kingdom Illustrated Vol 2* (New York: Derby & Jackson, 1859)2:557

Over tens of millions of years, flowering plants have become the largest group of plants on the planet. In order to reproduce sexually, they overcame their immobility by developing ways to exchange pollen over a distance. The two most successful methods are animal pollination, accounting for about 75% of all plant species (NRC, 2007), and wind pollination. Especially through animal pollination, plants can maintain a more diverse genetic pool, which makes them more adaptable to environmental changes.

More than 180,000 flowering plant species rely on insects, birds, and mammals for pollination (NRC, 2007). Most of these animals are guided by the flower's color, shape, and scent in order to find nectar, an important source of sugar that fuels their activities. Some pollinators are also in search of pollen, a rich source of protein. When search-

ing for these resources, animals transfer pollen from the male to the female flower parts. Therefore, the plants and pollinators depend on each other for survival: plants rely on pollinators for reproduction, and pollinators on plants for food.

Source: *Encyclopaedia Britannica* (11th ed., vol. 3) (New York: The Encyclopaedia Britannica Company, 1910) 3: 625



Honeybee

The ongoing decline in pollinator populations is a global concern. Plants pollinated by animals are the basis for most ecosystems, as primary sources of food and shelter for a wide variety of organisms. Moreover, the value of all animal-pollinated commodities used directly or indirectly by humans, such as for food and fiber, is estimated to be in the billions of dollars in the US alone. Prominent reasons for the loss of animal pollinators are habitat destruction, mono-culture cropping systems, pesticide misuse, and invasive plant species.

A pesticide-free garden, composed of plants selected for continuous and varied bloom throughout the year, can provide an oasis for pollinators. Furthermore, when gardeners' efforts are replicated throughout the community, these oases become sustainable pollinator habitats, providing an elegant answer to our pollinator crisis. Please promote the pollinator conservation message by joining our Pollinator Friendly Garden certification program. Your help and flowers will make a difference!

#### **Bibliography**

National Research Council. (2007). *Status of Pollinators in North America*. Washington DC: Board on Life Sciences, Board on Agriculture and Natural Resources, National Academy of Sciences.

# **Pollinator Friendly Garden**

## **1. Animal Pollinated Plants and Their Importance**

## **2. Pollinators and Their Threats**

### **2.1. Bees & Birds**

### **2.2. Beetles & Flies**

### **2.3. Butterflies & Moths**

### **2.4. Other Pollinators**



Source: S. G. Goodrich *Animal Kingdom Illustrated* Vol 2 (New York: Derby & Jackson, 1859)2:557

## **3. Gardening for Pollinators**

### **3.1. Pollinator Food**

### **3.2. Pollinator Nesting Habitat**

### **3.3. Manmade Pollinator Nests**

### **3.4. Pollinator Friendly Practices**

### **3.5. Hymenoptera Stings**

## **4. Pollinator Friendly Garden Certification**

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