


GARDEN VARIETY NATIVE BEES OF NORTH AMERICA – PERPETUAL CALENDAR


A male bumble bee (*Bombus flavifrons*) drinking nectar from purple toadflax (*Linaria purpurea*). Photograph by Rollin Coville.

JANUARY

Approximately 50 *Bombus* species in North America.


Manzanita with bumble bee queen.

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Genus: *Bombus*

Common Name: Bumble Bee

Pollen/Nectar Sources Include:
Agastache (giant hyssop)
Arctostaphylos (manzanita)
Ceanothus (ceanothus)
Eschscholzia (California poppy)
Helianthus (sunflower)
Penstemon (beardtongue)

Emergence Time: Queens in early spring, followed by several generations of female workers starting in late spring, and finally males and new queens, in mid to late summer.

Nesting Habit: Cavity nesting, using abandoned rodent nests or other pre-formed cavities, typically in the ground or under grass tussocks.

Distinguishing Characteristics:

- Medium to large, robust bees, ½ to 1 inch in length. Queens are much larger than either female workers or males.
- Typically black, very fuzzy bees with varying numbers, and sometimes combinations, of yellow, red, orange, brown or white colored bands on thorax and abdomen. In some species, the male has lighter coloring than the female.
- Bumble bees form annual colonies; mated queens overwinter in dry cavities and then found new nests in the spring.
- Female carries pollen, moistened with nectar, in a fringe of stiff, inward curved hairs on her hind legs, called a pollen basket (visible in the photo below).
- Bumble bees are excellent crop pollinators, more effectively pollinating crops such as tomatoes, cranberries and blueberries than honey bees.

Pollinated garden crops include:
Tomato, apple, peppers, blueberry, sunflower, watermelon.

Below: A worker bumble bee (*Bombus vosnesenskii*) carrying a load of pollen on her hind leg. Photo by Rollin Coville.












Join the Hunt for Bees!

The Great Sunflower Project
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A portion of the proceeds from the sales of this calendar will support the conservation efforts of:

- The Great Sunflower Project, a national pollinator monitoring and conservation program. Learn more by visiting www.greatsunflower.org.
- The Xerces Society for Invertebrate Conservation, a nonprofit at the forefront of protecting native bees and their habitat across the country. Learn more by visiting www.xerces.org.

The Xerces Society
for Invertebrate Conservation

Rollin Coville

Rollin received his Ph.D. degree in Entomology from the University of California at Berkeley in 1978. For more than 25 years his primary outside interest has been photographing insects and spiders. Recently, he has collaborated with both Dr. Gordon Frankie at UC Berkeley and Dr. Robbin Thorp at UC Davis on a number of projects involving the study of urban bees. Visit Rollin's photo gallery at www.covillephotos.com.

Celeste Ets-Hokin

A zoology graduate from U.C. Berkeley, Celeste has devoted her recent environmental efforts to promoting awareness about native bees and the importance of their conservation. Her North American Bee calendars have been developed to inspire gardeners and growers with an appreciation for the great diversity of native bees that inhabit our landscape. Celeste has collaborated with the Alameda County Master Gardeners for the past several years in establishing a native bee demonstration garden located at the Gardens at Lake Merritt in Oakland, California.

Special thanks:

To Dr. Gordon Frankie of U.C. Berkeley for sharing his extensive research knowledge of the ecology of native bees in urban gardens. Visit his site at http://helpabee.org/

To Dr. Robbin Thorp of U.C. Davis for providing considerable insight into the biology and ecology of several native bee genera featured in this calendar.

To Dr. Claire Kremen of U.C. Berkeley for providing valuable information on crop pollination services by native bees, based on her field studies in Yolo County, California.