"Bees...RUN!" are words seared into my memory from my childhood on the family farm. I recall my father and I had unknowingly uncovered a bumble bee nest in the machinery shed, annoying the colony and creating quite a disturbance. Incidents like this taught me to fear bees and anything else that could sting.

My fear of bees would remain intact until my junior year in college. An entomology course and an inspiring professor opened the door to the fascinating world of insects and, through understanding and exposure, my fear of stinging insects not only lessened but I was launched in the opposite direction...one of utter fascination.

A fledgling interest in bees came in handy when I took over management of the honey bee colonies in my early days as an educator at Long Branch Farm & Trails. Under the tutelage of a veteran beekeeper, I quickly learned to observe the mood of the colony. If I was stung, it was because I had chosen the wrong day to open the hives or was too abrupt in my movements. Painful stings served as a reminder to pay attention.

Heightened observation skills and a basic understanding of beekeeping prompted me to wonder about other species of bees. At that point, a whole world of bees opened up.

I have come to realize the fear and misunderstandings about bees I acquired as a child are also common with many people. I set about helping people transform their fear into understanding and encourage them to become more comfortable in nature.

Will bees sting?
In the Cincinnati area, when people say "bees," they often mean yellow jackets. Yellow jackets, like their relatives the wasps and hornets, are as different from bees as cats are from dogs. While true bees have the
capacity to sting, they are far less defensive than their cousins the wasps, hornets, and yellow jackets which tend to have more extensive patterning and coloration to warn of their aggressiveness. True bees, however, are docile, particularly when they are visiting flowers.

What's more, a bee's stinger is a modified egg-laying tube. While only female bees have the capacity to sting, they have no interest in doing so. Male bees lack the anatomical parts to sting.

**Where do bees live?**
About two thirds of bees nest in burrows in the ground and the other third of bees build their nests in abandoned beetle burrows in wood, or in hollowed out pithy stems.

**How do bees live?**
Bees that live in large groups capture our attention but only about one quarter of bee species are social, like honey bees or bumble bees (with a queen and workers). Native bees such as some sweat bees also nest cooperatively.

Other bee species native to the United States are solitary nest builders. A single female constructs a nest on her own, collects enough food for the complete development of an offspring, lays an egg on the food mass, and then repeats the foraging and egg-laying again and again.

**How many species?**
When asked to name species of bees, most people first cite the large bees like honey bees, bumble bees, and carpenter bees. They are surprised to hear there are over 3,700 species of bees in the United States and an estimated 500 species in Ohio alone.

—continued on next page
Common Bee Species You’ll See in Your Garden

**Honey bee (1 species):**
Imported by colonists from Europe in the early 1600s, non-native honey bees remain the major agricultural bee. Look closely, they even have pollen-collecting hair on the eyes.

**Squash bee (1 species):**
Feeds only on blossoms of pumpkin and squash and nests in the ground near fields of same. Active in early morning, squash bees dart in and out of pumpkin and squash blossoms. Carries pollen on “leg warmers”. Males often spend the night in blossoms.

**Carder (64 species):**
Named after cards, the tools used to straighten and clean sheep’s wool, carder bees scrape hair from fuzzy leaves which will be used to line their nests. Accidentally introduced into North America from Europe.

**Bumble bees (49 species):**
Named for their bumbling movement. Nest underground often in unoccupied rodent nests. Can fly in cool weather.

**Mason bee (197 species):**
Use mud to line their nests which are made in pre-existing above ground holes left by humans or insects. Solitary but may nest in groups. Metallic green, blue, or bluish-black.

**Mining bees (466 species):**
Excavate solitary nests in the ground. Appear to be carrying pollen in “armpit” of rear legs.

**Sweat bees (287 species):**
Some species are attracted to the salts in sweat. Usually nests in the ground.
- Bright metallic green
- Black or brown with bands of light hairs on abdomen.

**Leaf cutter bee (136 species):**
Use their sturdy jaws to cut circular pieces of leaves which are used to line their nests. Solitary but may nest in aggregations in above ground holes left by humans or insects. Carry pollen on thick hairs on the underside of their abdomen.

**Carpenter bees (36 species):**
Large carpenter bees are similar in shape to bumble bees but with a hairless shiny black abdomen. They excavate tunnels in dry wood for nesting. A male carpenter bee has a white square on his head and patrols territory, chasing off other males and even birds. Small carpenter bees are shiny and dark blue-green with shield-shaped abdomens. They nest inside twigs and stems.