

I ADMIRE BUMBLEBEES

By

Terry W. Johnson

Until I retired, I never spent much time watching bumblebees. I guess, like most folks, I took them for granted. Nowadays, with more time on my hands, the flight of a bumblebee never fails to grab my attention. My observations of bumblebees visiting flowers in my backyard, coupled with learning more about them, has transformed me into a great admirer of these large, hairy insects.

Forty-nine species of bumblebees are native to North America. Seventeen of them reside in Georgia.

One of the first things I noticed about these flying insects is that they are extremely industrious. They can be seen before many trees have even leafed out in March, are still around eight months later when most of the leaves are donning their autumn colors in November.

During this time, they begin visiting flowers early in the morning, long before most other wild pollinators are flying. As

the sun sets below the horizon, they are still hard at work long after most other diurnal insects have settled in for the night. During their extended workday, they visit more flowers and collect more pollen and nectar than other insects.

According to U.S. Forest Service research ecologist Joseph O'Brien, "Bumblebees are extremely efficient pollinators. In the time it takes for a honeybee to pollinate a single blueberry flower, a bumblebee can pollinate as many as six."

In order to work this hard, bumblebees have an extremely high rate of metabolism. The hummingbird's high rate of metabolism is considered one of the highest of any warm-blooded animal. However, it is nothing compared to that of the bumblebee. Entomologists tell us the bumblebee's rate of metabolism is seventy-five percent higher than that of the hummingbird.

Bumblebees can carry heavy loads. On average, a bumblebee returns to its nest laden with nectar and pollen amounting to roughly twenty-five percent of its body weight.

However, some bumblebees can tote a payload upwards of seventy-five percent more than their body weight.

This is remarkable on many levels, especially when you look at their relatively small wings. We have all heard the old adage that says *looks can be deceiving*. That is definitely the case with the bumblebee's wings, they appear so short one cannot help but wonder how a bumblebee can fly let alone carry anything. The truth of the matter is, although the bee's wings are short, they are powerful, and can beat 130 times per second. This rapid movement, coupled with their large bodies, causes flowers of plants such as tomatoes and blueberries to vibrate and release their pollen.

Bumblebees also flap their wings differently than many other masters of the air. Instead of flapping their wings up and down, they beat their wings back and forth.

Researchers have also discovered that bumblebees do not simply visit a host of different flowers on a single foraging trip. Instead, roughly thirty-two percent of bumblebees will return to their hive carrying the pollen of only two kinds of flowers, while

fifty-five percent of the bumblebees will bring home the pollen of one species of flower.

Entomologists have also found that bumblebees leave a scent mark on flowers they have already visited. This proves invaluable to other bumblebees that are also looking for food. When they fly up to a flower that has already been visited by another bumblebee, the scent marker tells the bee not to waste its time looking for nectar and pollen that has already been gathered. In most cases, the bee will move on to a bloom that has not been recently visited by a bumblebee.

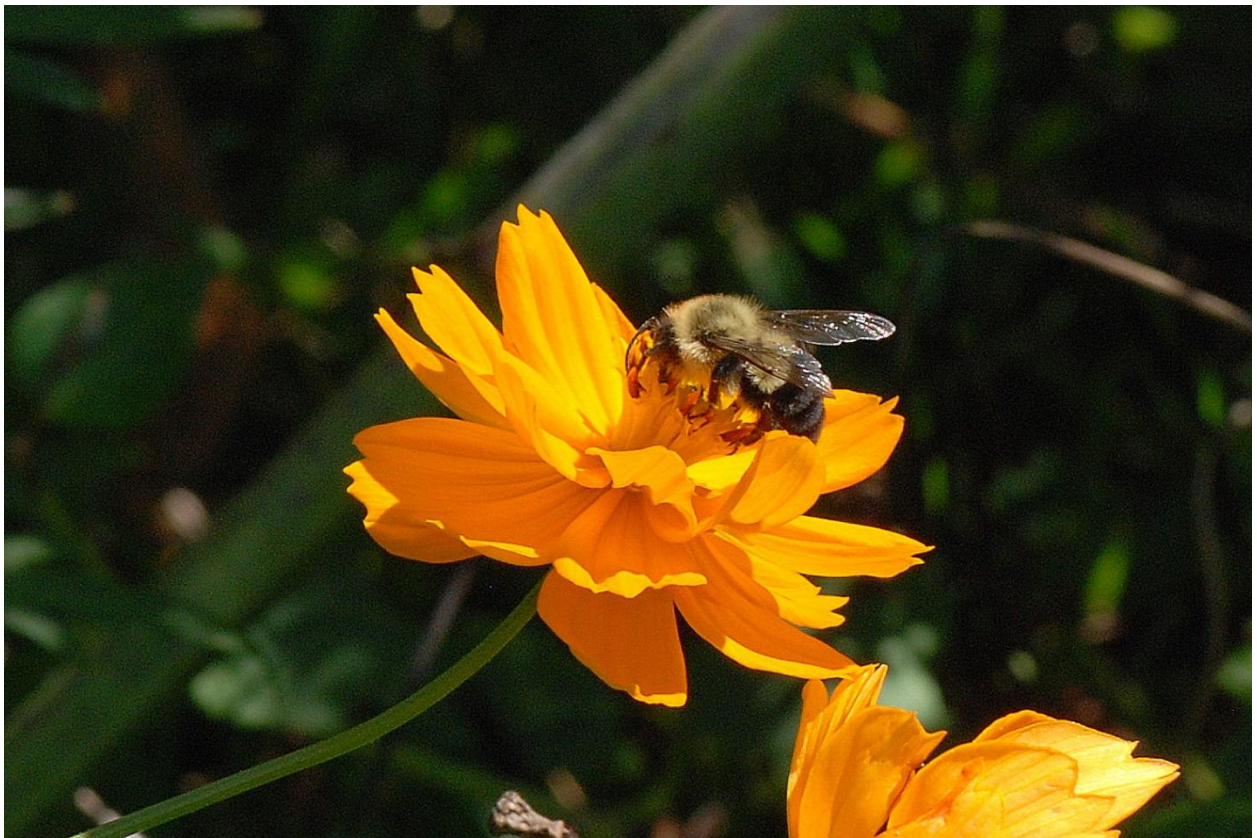
We have all heard about honeybees performing a figure-of-eight-dance when they return to the hive. This elaborate dance tells its fellow worker bees where they can locate a great source of food. Well, it seems that bumblebees can also communicate with others. Although bumblebees do not perform an elaborate dance, when a bumblebee returns to its nest, it rapidly fans its wings and scoot about. This apparently spreads the scent of the flowers where the worker found a good source of food. Other

workers then leave the nest in search of flowers with the same aroma.

Space does not permit to describe all of the bumblebee's amazing behaviors and abilities. Suffice it to say, the more researchers learn about this amazing bee will only bolster its reputation as a valuable pollinator.

From spring, when redbud trees are in full bloom until late fall when Encore azaleas are still blooming, I enjoy watching bumblebees visit a parade of flowering plants growing in my yard. I marvel how hard they toil collecting pollen and nectar. It is obvious to me their efforts by far exceed those of other wild pollinators.

If you take the time to watch this valuable native bee work the flowers in your backyard, I am certain you will join the ranks of those of us that have come to realize these fascinating pollinators enhance the beauty of our landscape and quality of our lives.



BRIEF BIO

Terry is a retired wildlife biologist and the first program manager for the Georgia Department of Natural Resources' Nongame-Endangered Wildlife Program (now called the Wildlife Conservation Section). He presents wildlife-related programs throughout the state. He has authored two books. He also writes a weekly column for the Monroe County Reporter (Monroe Outdoors) as well as a monthly column (Out My backdoor) for the Georgia Wildlife Resources Division. His endeavors have earned him more than 70 awards for wildlife conservation, as well as wildlife photography and writing, including the Garden Club of Georgia's Award of Merit.

