

Springer Middle establishes native meadows



Students at Springer Middle School work with Dr. Don Coats, DVM to plant native wildflower seeds.

When retired veterinarian Dr. Don Coats of Chadd's Ford, PA, visited Brandywine's Springer Middle School last year to discuss bees, he could not have known how far the school would go to welcome the threatened species.

Coats, a beekeeper and advocate for native bees and plant species, attended a Springer zoology elective at the request of eighth grade science teacher Jonathan Sypher. Coats shared with students a live hive and explained to them in detail how bees are important to the ecosystem. He discussed the need for bees to have access to native wildflower gardens, or native meadows, which offer a mix of seasonal grasses and insect-friendly wildflowers to support declining populations of pollinators, such as bees and also butterflies and moths.

Sypher, who has been teaching a zoology elective at Springer for over three years, wondered if the two grassy areas near the school's bus lane would make good native meadows. He asked Coats to come back and take a look. Coats has created native meadows at Winterthur, Oberod, Flint Woods and more in an effort to expand native areas in the region. He agreed that Springer had the location for a native meadow. Last summer, with the support of Springer Principal Tracy Woodson, Sypher and Coats started creating Springer's first native meadow outdoor learning area.

Last fall, in anticipation of the garden, students at Springer helped prep and sow native wildflower seeds like black-eyed Susans, mountain mint and milkweed. In March, they added additional plants that had already been germinated. Today, the plants are thriving and playing host to many species of bees, moths and butterflies. Springer's native meadow is ready for students to study this fall.

"Dr. Coats' program encourages and facilitates areas for our native bees to flourish," said Sypher. "Students aren't always sure of the roles that bees play in pollinating plants and the importance of them for crop fertilization. They have been excited to go outside and get their hands dirty. They are active and involved, even in cold weather."

The meadows will be used by three different middle school classes: grades 7 and 8 zoology, grades 6 and 7 environmental science and grade 8 science. Data will also be shared with Coats and the Xerxes Foundation, which monitors native meadows and their impact on pollinators.

Sypher, a bee lover himself, says that people often falsely believe there are only a few types of bees in the Northeast when there are actually hundreds of species of bees in the area. Many people do not realize that a number of bees are not native to this area as well, but are really European honeybees that have been introduced over the years. Bee populations have been in sharp decline over the years.

Springer's native meadows are deeply aligned to the Next Generation Science Standards (NGSS) standards, which promote experiences that connect instruction to real-world scientific inquiry, engineering design and understanding the broad concepts that are common to all scientific disciplines. NGSS helps districts and charter schools set the expectations for what students should learn in science and know by the end of each grade level. Delaware adopted NGSS in October 2013 and was a lead state partner in the development of the standards.

"Some of the 8th grade students were disappointed that they would not see the gardens come to bloom," said Sypher. "I invited them to come back to see the fruits of their labor this year. Returning students, of course, will get to examine, count and catalog both the plants and insects this fall."