

Live Free and Dig

with the Littleton Garden Club

Second Annual “Land that I Love Mini-Conference”

helps community understand environmental sustainability challenges

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Littleton Garden Club

At the Aug. 3 Agrarian Society of Peacham’s “Land That I Love” Mini-Conference, researchers and land use innovators shared their efforts to mitigate the environmental effects of

climate change.

Ellie Blachly, the conference organizer, opened the conference by posing the question: How can we capture more rainwater? With rain simulators at Vermont Technical College, researchers study relationships between

varied rainfall events and livestock grazing events, hoping to maximize the rainfall amount that “infiltrates” into the soil.

Eric von Wettberg, UVM professor of Agriculture, Landscape, and Environment, explained how scientists have met

the problem of reduced water availability around the world—not by increasing soil capture, but by moving rainfall inland, away from the ocean where it would originally have fallen without an intervention. How is

LGC, PAGE A6

this accomplished? Eric explained that all plants move water upward from the soil to their aerial parts, where it evaporates to the atmosphere in a process called evapotranspiration, moistening the surrounding air. Over large green spaces such as forests, moist air rises, reaches a certain height, condenses, and falls as rain. This change from gas to water at high altitudes reduces the atmospheric pressure, drawing air upward from below, creating areas of low pressure at lower altitudes. These, in turn, draw moist air inland. By these actions, large green spaces serve as "biotic pumps" — with pressure differentials strong enough to power wind currents that transport moist air from over the ocean to areas over land. This "imported" air rises, condenses, and falls over land as additional

rainfall, and the cycle repeats. Scientists hope that by creating enough green spaces, they can offset evaporative losses caused by global warming.

Carl Bielenberg, founder of Village Industrial Power in Calais, Vt., spoke about his experience in Tanzania, where this application of knowledge achieved a real outcome. Large green swaths, planted by landowners working together, transported additional rainfall onto land that had once been desert.

Sophia Bielenberg, who uses indigenous Abenaki "no-till" farming methods to grow food crops in Calais, VT, shared her success. Used from the mid-1600s to the mid-1800s, these methods support soil sustainability, and without power or added water, yield abundantly year after year.

Julie Michaelson, Pollinator Conserva-

tion Specialist at the Xerces Society, shared myriad ways that individual landowners can create cooler temperatures and increase biodiversity. Here again, we learned about the importance of planting trees. Deciduous trees create a leaf canopy that lowers the surrounding air temperature—evapotranspiration at work. Native trees provide insects with three essential needs: food, shelter, and habitat for raising young. Why help insects? Contrary to popular belief, although bees are pollinators, insects that are not bees comprise the majority of this group. For them, a native tree in bloom becomes "a three-dimensional meadow in the sky." Suggested trees that support insect pollinators are oak, hickory, and linden. Shrubs also suggested for this purpose were viburnum, dogwood, and low bush blueberry.

Some insects not only pollinate, but also control pests, and supporting them helps minimize predation on potentially vulnerable species. For example, dill, cilantro, and mint attract ladybugs, the larvae of which destroy aphids, a lupine predator.

Other tips: if fallen leaves are left on the landscape (instead of being removed in bags or chopped up), they create overwintering habitat for many species. Stems allowed to remain on hollow-stemmed plants (for example, bee balm and Joe Pyeweed) in alternating lengths between eight and 24 inches create nesting habitat for bees. Xerces.org is a well-supported website for learning how to help pollinators.

Zoryan Ivakhiv-Gray shared about Pollinator Friendly Greensboro, a community group working to help the town of Greensboro, Vt. become a National Wildlife Federa-

tion-certified community wildlife habitat.

At the end of the day, we were asked, "Will you do something, or nothing?" These knowledgeable, impassioned presenters energized all who attended to think further about how we can help create "winds of change" in the world around us.

The Peacham Agrarian Society is looking for new members to help strategize and host educational evenings on science related to ecosystems, food, compost, the biotic pump, biodiversity, and climate. Those interested, please contact ellenblachly@gmail.com

The Littleton Garden Club is made up of individuals from around the area that are interested in gardening, nature, community, learning and having fun. New members are welcome. For more information, visit our Web site at: <https://www.littletonnhgardenclub.org/>.