Coexisting with Nature

Burn down your cities and leave our farms, and your cities will spring up again as if by magic, but destroy our farms and the grass will grow in the streets of every city in the country.

— William Jennings Bryan
1860 - 1925

The goal of the Ecological Landscaping Association is to educate, collaborate, and network to promote environmentally responsible design, installation, and maintenance — or simply put, to help those who landscape tread more gently on the earth.

The ecological landscaper strives to create an attractive green space that will support the natural ecosystems present on a site. Can we live happily with some dandelions and clover in the lawn, if it means that we apply fewer herbicides and less high-nitrogen fertilizer? Maybe. Let's strive to create "demonstration gardens" to help educate our clients and others that we can have beautiful green spaces while working with nature. The "by-product" is better health for all.

Weeds in the lawn are one challenge but what about the challenge of living in harmony with critters? What's an ecologically-minded horticulturist to do? Deer, squirrels, bears, raccoons, skunks, and insects all want a part of the landscape pie. How do we protect our space from them without causing damage to ourselves? Ron Whitehurst of Rincon-Vitova Insectaries says it well: "Everything eats and is eaten by something else; the idea is to bring a dynamic balance between pests and their natural enemies." The article on "Sharing Space" on this page of The Ecological Landscaper focuses on some gentler ways to rid our landscapes of various pests.

Fran Gustman is editor of this newsletter and of the HortResources Newsletter and is the garden columnist for the Allston-Brighton TAB.
"Gramma said when you come on something good, first thing to do is share it with whoever you can find; that way the good spread out where no telling it will go. Which is right."
—Little Tree in The Education of Little Tree, by Forrest Carter

On moles and voles. People seem to confuse moles and voles, maybe because the names rhyme.

Moles are more benign in the garden. They live most of their lives below ground, eating continuously of grubs and worms; they are insectivores. In New England, moles range in size between 5 and 8 inches.

Voles are herbivores and live above ground, under leaf litter. The pine vole is 3 to 4 inches and the meadow vole is 3 1/2 to 5 inches. Voles are also called “pine mice” but they are not mice.

People also confuse both moles and voles with the shrew, which has a long tail like a vole. It stays under leaf litter like a vole but should be regarded as beneficial as it is a carnivore, eating slugs, snails, and mice. —ed.

When the snows of winter melt, there is a loud cry of despair heard echoing from hill to hill as gardeners become aware that swaths of once peaceful green now resemble B & O railroad yards.

Moles do not eat bulbs or roots. They will chew through them if the plants are in the way but they do not ingest the results of their chewing. However, in their zeal, they often do damage by heaving up the lawn, causing the grass to dry out quickly and creating unsightly ridges from their tunnel-tops, a sight that irritates some people more than paying taxes.

Garden writers and extension agents have attacked these poor creatures in print and in the field. There have been many methods tried to remove moles, but I've never seen any work except cyanide gas, which is too dangerous. Catalogs sell windmills on spikes that make a rumbling noise meant to scare moles away. Substances recommended to cause a fast demise by ingestion include dollops of Tabasco Sauce, chili powder, chewing gum, and mothballs. Some people suggest pouring castor oil down the holes — forget it. Poison bait isn't a good idea if you have a cat, dog, or child that is valuable to you.

I've even heard suggested hooking up a hose from the exhaust of a car to the holes — messy to the lawn and dangerous to everybody.

If you have many moles, they are doing something for you that you haven't done for yourself — they are killing garden enemies. A surfeit of moles is always tied to a bumper crop of grubs, especially Japanese beetles. Milky spore disease may be an effective biological control [landscapers in New England say that is less true in cold areas — ed.]; it is a fungal disease that infects the larvae of Japanese beetles but bothers nothing else. It will take a year or more to effect the cure and until then the moles will dig tunnels and hunt for food. When the food runs out, they will too.

Other animals, including voles and mice, may use the tunnels, so stomp the ridges down to fill them in. —Peter Loewer is a botanical illustrator included in the Carnegie-Mellon Institute of Botanical Documentation. He has written and illustrated over 30 books, including The Wild Gardener; thewildgardener.com.

Moles dug the most extraordinary network of tunnels in my garden going after grubs and 25% of my garden each year for about five years died from collapsing into the tunnels. I tried everything, from battery-operated vibrating devices to the urine of half the wild animal species in the northern hemisphere, until I
started using milky spore twice a season, beginning and end. It’s available mixed with a granular substance so that it spreads easily in a spreader at a standard #18 opening. The number of moles was significantly reduced by the end of the first season. Any large garden supply operation will have it. —Andrea Barrist Stern, Woodstock, NY, is an associate editor for Woodstock Times, a freelance journalist, and a photographer; abarriststern@aol.com.

Milky spore disease, Bacillus popilliae, takes a while to spread through the Japanese beetle population but will last for years. The downside is that this disease is highly specific to Japanese beetles and doesn’t go after other grubs.

Faster and broader spectrum are insect pathogenic (or entomophagus) nematodes. Heterorhabditis bacteriophora, H. indica and H. marelatus are three species that work well on grubs — lots of kinds of grubs: white grubs, chafer, black vine weevil, corn root worm, cucumber beetle, as well as billbugs, thrips (pupating in soil), root aphids, root mealybugs, and to a lesser extent other insects in the soil. So if you don’t know what kind of grubs are affecting the roots of the grass, or attracting moles, raccoons, or skunks to dig up your sod, use nematodes. —Ron Whitehurst of California is Marketing Manager, Rincon-Vitova Insectaries. He can be reached at bugnet@rinconvitova.com, rinconvitova.com.

If voles get out of hand the best method of control is an old-fashioned mouse trap baited with small bits of apple. —Andrew Messinger has taught horticulture at the Brooklyn Botanic Garden and writes “The Hampton Gardener” weekly for the Southampton Press.

On deer. Brent Heath of Brent and Becky’s Bulbs suggests planting bulbs that are poisonous and thus “pest-free.” These include all those in the Amaryllis family, such as daffodils (Narcissus), snowdrops (Galanthus), Triteleia (Brodea), and summer snowflakes (Leucojum) and those in the Ranunculus family, such as anemones and buttercups. Bulbs that animals will eat but do not prefer are considered “pest-resistant”; among them are allium, fritillaria (although this is susceptible to red lily-leaf beetle, as are all plants in Liliaceae), muscaria and chionodoxa.

Tulips are among the favorite eats of deer and are even edible to human beings. Brent and Becky add tulip petals to salads; sweetly fragrant tulips are best for this use. During World War II, the Dutch supplemented their meager diets by eating their tulips, which supplied them with starch.

To keep the deer away, however, Brent suggests applying Ropel to bulbs before planting and to add a handful of sharp gravel to the hole when planting. When the leaves emerge, he sprays with Deer-Off, which is concocted from smelly egg solids. Brent strongly discourages the use of bone meal, which attracts dogs and rodents that will dig up the bulbs even if they don’t eat them.

On birds. Birds are generally desirable in the garden to eat insect pests, but the bird feeder itself may cause a problem. One gardener had a bear attracted to the sugar water that she hung for hummingbirds. The allelopathic effect of sunflower seeds will kill a wide swath of vegetation so plan for hardscape below the feeder. —ed.
Why I Adore Decollate Snails
Debra Lee Baldwin

In my garden, I have tiny helpers who protect flowers and tender leaves from harm. I pay them nothing, never see them, and feel amazingly blessed to have them.

Fairies? No, decollate snails.
If you've yet to get decollates, it's probably because you've heard they eat seedlings. I've never seen any evidence of that, but I have seen common garden snails consume not only seedlings but entire pony packs. Decollates (Rumina decollata) feed on decaying organic matter when they run out of their preferred food, the eggs and young of the brown garden snail (Helix aspersa), so they're also little composters.

When I first cultivated in Southern California what seemed to be a half-acre salad bar for helix snails, I bought snail bait by the 50-pound bag. Fortunately, my dog never went near it. Now, seven years after introducing decollates, I've saved their cost many times over in bait I haven't bought. And I'm no longer dumping poison onto the soil.

For years, on foggy evenings, my husband, son and I hand-picked helix snails by the bucketful. Perhaps neighbors, seeing our flashlights, thought someone had lost a contact lens. Day or night, whenever I found a snail, I squashed it or threw it into the street. Once I propelled a large snail through the open window of a pickup truck. Oops.

An editor from a big publication visited. She wore a business suit and heels and minced gingerly through the garden. I'll never forget the look on her face when I crunched a juicy snail the size of a ping-pong ball beneath my Reeboks. It's a wonder she stayed for lunch.

In 1994, Sunset magazine assigned me a Garden Guide item on decollate snails. It was only a couple hundred words, but I researched the topic thoroughly. I learned that San Diego's main source of decollates was Mary Borevitz of San Marcos, who had bought a handful of the inch-long, conical-shelled snails back in 1984.

"They looked dead when they came in the mail," Mary told me. "I tossed them under a tree in my orange grove and forgot about them."

Evidently the decollates were merely dormant, because it wasn't long before that part of the grove had far fewer helix snails. Soon, Mary's well-fed decollates were so numerous, she started collecting them and selling them via mail order.

I went from being skeptical to wanting decollates desperately. But I had just spread snail bait! Mary told me to wait six weeks for it to dissipate. Then I bought a plastic cupful of snails, which look like periwinkle seashells only not as pretty, and tucked them beneath cannas, nasturtiums, aloes, and everything else. A hundred snails went fast and I'm not a patient person, so a week later I blitzed the garden with five hundred more.

For a year, I continued to handpick mature helix snails, squashing them and leaving the mess behind for the decollates — the existence of which, by the way, had become a matter of faith. Mary may be able to scoop them by the thousands in her tidy seven-acre orchard, but all I've found since 1994 is five empty shells. The reason, Mary says, is that decollates are nocturnal. During the day, to stay moist and cool, they burrow into the ground at the base of bushes.

I've noticed my garden's decollate/helix ratio waxes and wanes, probably because the predators decrease when they run out of prey. Since helix snails easily reintroduce themselves — all they have to do is sprint across the street, every other year or so, usually after spring rains, I buy a couple hundred decollates and drop them like little paratroopers into the garden. Incidentally, decollates don't climb, like helix snails do, so decollates tend to stay put in a terraced garden like mine.

Decollates, which are native to the Mediterranean (as are helix snails), have been approved by the ecological powers-that-be for release in...
Snails continued from p. 4

Southern California, but are not necessarily "legal" elsewhere. So, Mary's careful where she ships them. She says helix snails may have been imported to California as a food source during the gold rush, by European immigrants. I've also heard helix snails were introduced by some idiot who hoped to make a killing in escargot.

The Snail Lady, I'm happy to say, has done well. She counts among her clients the San Diego Zoo, the Wild Animal Park, Legoland, Sea World and the Four Seasons Aviara Resort. Last year, she sold her millionth decollate snail.

If it has been a long time since I've seen a helix snail, my initial reaction tends to be the same I had as a child: "What an interesting little creature. Look at its pretty shell..." But quickly I come to my senses and transform it into chow for what my husband calls "stealth snails" — and what I consider my garden's most valuable guardians.

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Decollate snails are available through Mary's Decollate Snails (Mary Borevitz): 760-744-9233, www.goodsnails.com, mary@goodsnails.com.
Ideal coverage is one decollate per square foot.
$21.50/100 snails; $88/500 and $137.50/1,000.

Debra Lee Baldwin won the Best Consumer Writing Award from the San Diego Press Club for this article. She has written for San Diego Home/Garden magazine, Sunset, and Better Homes & Gardens special issues. Contact her at Sunwriter7@aol.com.
Dr. Gwilyn Jones of Northeastern University guessed that the topic “Rodent Damage in the Landscape” might not be the best for right after breakfast. Attendance was lighter at this early Saturday morning presentation of the ELA Winter conference than on the previous day.

Dr. Jones started with a slide show of twenty local rodents, with a hare and acottontail thrown in, describing the mammals and the types of damage they can inflict on plants.

I learned that voles, mice, and muskrats are in the same family, Muridae, and differ primarily in the type of teeth; voles have prismatic or triangular teeth, while mice don’t. Voles eat the roots of trees and girdle trees at the soil surface.

Woodchucks are in the squirrel family, Sciuridae. Squirrels and chipmunks cause extensive damage by marking tree bark with their teeth; grey squirrels in New York City’s Central Park have stripped huge lengths of bark off old sugar maples, which has led to the deaths of the trees — although this is rare.

Dr. Jones explained that land owners and landscapers create rodent problems by altering the natural habitat and that we must correctly identify the source of damage before killing animals. We are responsible for humanely ending an animal’s life by shooting or poisoning; it is illegal to drown them or to transport them to new areas, both because they will be set up for turf wars and because the problem will shift to another spot.

There are some effective deterrents. Fox urine works to frighten rodents away from an area. A mesh screen buried a foot deep around tree trunks deters them from eating roots. One attendee wondered if chewing gum would kill rodents; Dr. Jones said it does but mouse or rat traps set directly on runs work better and are usually faster. Have-a-Heart traps, however, are unreliable.

Dr. Jones thought certain breeds of dog could be trained to hunt rodents; however, cats kill all kinds of things and are not recommended. He loved the idea of attracting owls to a property but added that owls would not be effective for a big rodent problem.

Dr. Jones acknowledged that rodent damage is an unpleasant problem for which there is no one-time solution.
Peter Picone, wildlife biologist for the Connecticut Department of Environmental Protection, spoke on creating wildlife habitat. He provided a list of flowers and shrubs preferred by hummingbirds and bees and handed out Enhancing Your Backyard Habitat for Wildlife to the first few rows of the audience, as a reward for sitting up close. This great booklet, which he compiled for the CT DEP, provides basic information on habitat enhancement, instructions for creating nest boxes and brush piles, plant lists, and a useful "Backyard Habitat Assessment Form." I wonder whether similar publications are available in New Hampshire where I live — or in other states.

The four basic requirements for wildlife are food, water, shelter or cover, and space. Space requirements vary dramatically among different species. The American robin, for example, requires 3 to 5 acres to raise offspring, while her cousin, the wood thrush, requires ten times as much space. While our properties may not support a breeding pair of wood thrushes, we may be able to provide food to help them as they migrate.

A manager of habitat must predict what happens seasonally and how wildlife interacts with the landscape. To increase the wildlife-carrying capacity of the properties we own or manage, Picone suggests that we inventory food, cover, space, and water as they change through the seasons. Then we should identify limiting factors. Finally, we should create a plan for habitat improvement. Picone feels we need to be especially aware of fragmentation of the landscape due to development, the swift and steady loss of habitat on woodland edges (young forest/thicket), and the encroachment of invasive species.

He also stresses the need to be patient. It takes time to create good habitat. Plants need to establish themselves, and animals need to find them. Picone planted a stand of bayberry that migrating warblers took four years to find, but they've come back yearly since.

Finally, Picone advised us not to fall into the trap of "paralysis by analysis" or its opposite "execution by instinct." We can become good habitat managers over time, learning from books and by trial and error out in the field. He ended with these words from Mark Twain: "Bad judgment comes from inexperience. Experience comes from bad judgment."

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Suburbia is where the developer bulldozes out the trees, then names the streets after them.

Bill Vaughan (1915 - 1977)