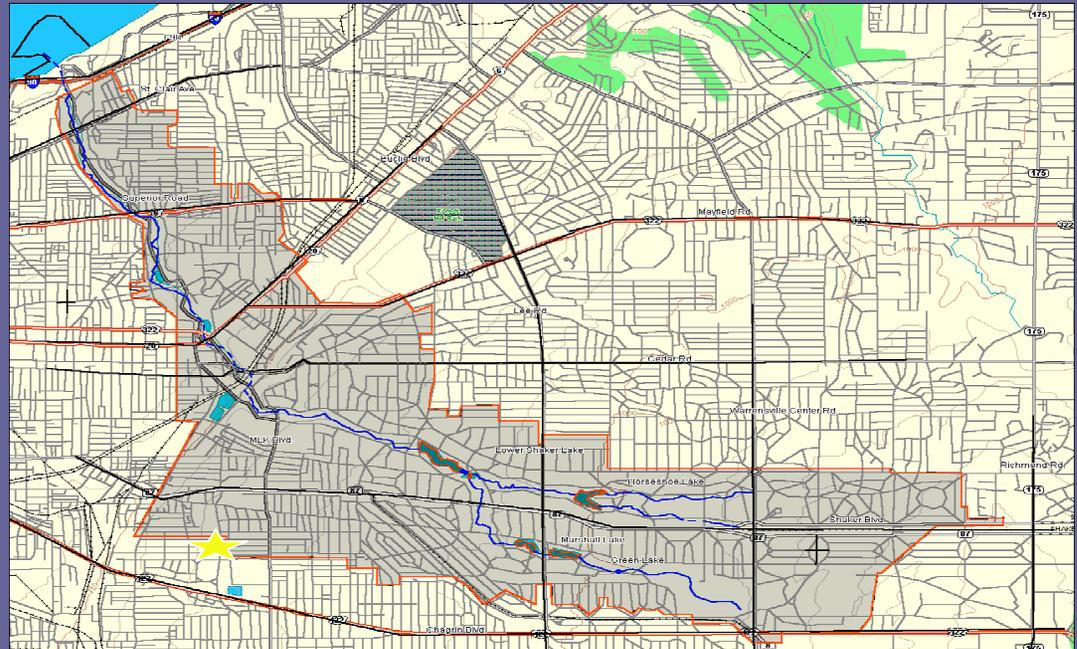


Special Request from the fish of the Doan Brook & Shaker Lakes: Oxygen

The Nature Center at Shaker Lakes & the Doan Brook Watershed Partnership work together to promote:

- Wise Water Use and Water Efficiency
- Green waste reduction
- Fertilizer management
- Native Plantings
- Pollution Prevention
- Soil Health
- Mulching
- Backyard Wildlife Habitat
- Composting
- Integrative Pest Management
- Alternative Groundcover
- Permaculture



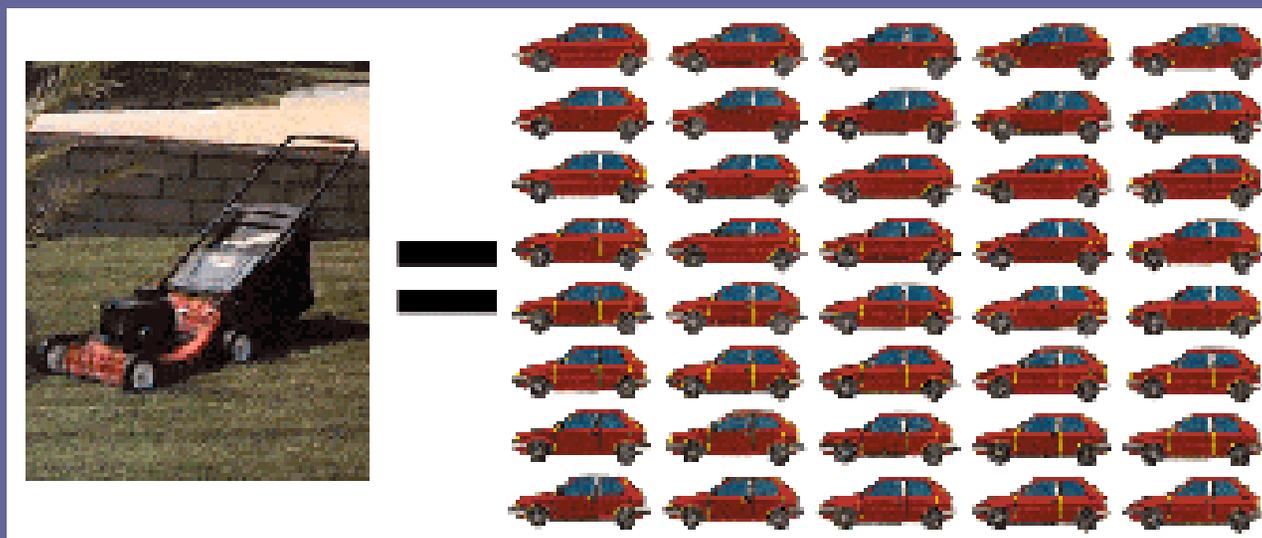
Sustainable Landscaping or Getting your Lawn off Drugs

Our yards link together to create
a larger ecosystem.

With the ideas that follow,
consider the impacts of our
common model for domestic
and commercial landscapes...



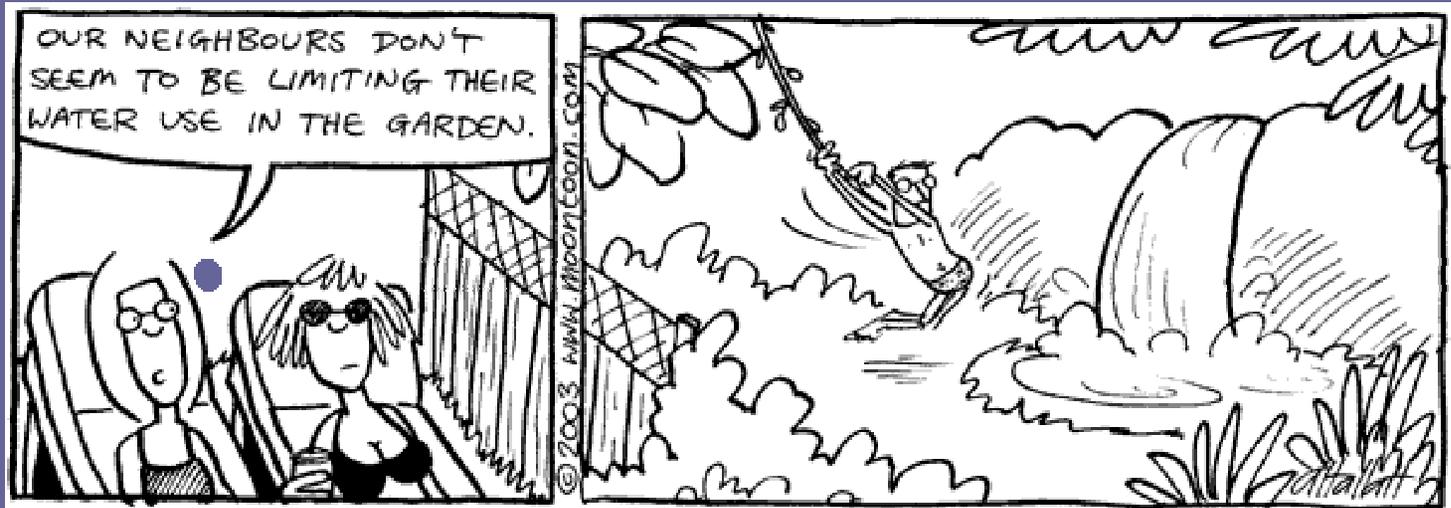
Air Pollution & Fossil Fuel Consumption



- A car would have to drive 7700 miles at 30 mph = a gas-powered leaf blower used for 1/2 hour—(Ted Steinberg: American Green, the Obsessive Quest for the Perfect Lawn)
- Lawn and garden equipment emit 5% of ozone-forming VOCs
- Landscapes consume petroleum, indirectly, through transportation, fertilizer and pesticide production, and unnecessary yard “waste” disposal.
- Home heating and cooling is more intensive in landscapes without trees

Consumption of Natural Resources - Water

- Lawns use 30% of municipal fresh water supply in East; 60% in West
- A little perspective: In one day, 200,000 gallons of water can irrigate one golf course or meet the daily water needs of 2200 Americans



Water Pollution – Fertilizers & Pesticides

- 40-60% of nitrogen applied to commercial and residential landscapes ends up in surface and groundwater
- In the US each year, we use about 67 million lbs of pesticides = FOUR TIMES more than the amount used by the agricultural industry
- 1/3rd of users dispose of excess pesticides by dumping them down storm drains, which lead directly to our rivers and lakes



Green Lake in Shaker:

eutrophic conditions lead to odor and zero oxygen

Water Pollution - Hydrocarbons



- 17 million gallons of gasoline are spilled by Americans every summer while refueling their lawn mowers, leaf blowers, and other gardening equipment, that's about 50% more oil than the notorious Exxon Valdez disaster.

Stormwater Runoff

- When lawns replace natural ecosystems, stream flooding is much more severe
- While not pavement, many consider lawns to be an impervious surface.

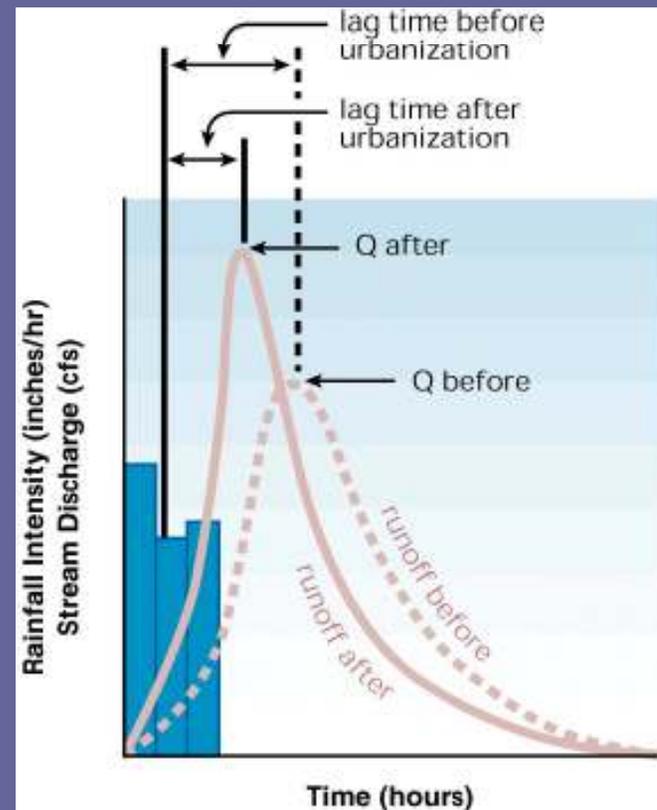


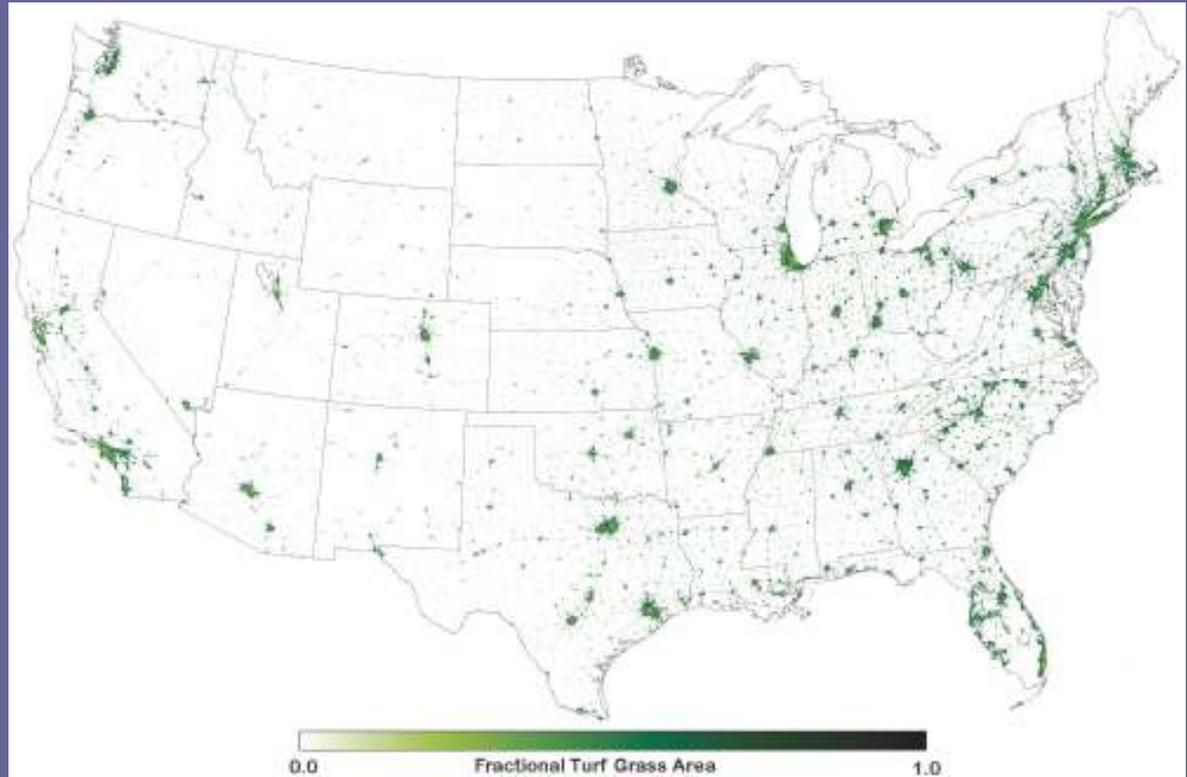
Fig. 1.15 -- A comparison of hydrographs before and after urbanization. The discharge curve is higher and steeper for urban streams than for natural streams. In *Stream Corridor Restoration: Principles, Processes, and Practices* (10/98). Interagency Stream Restoration Working Group (15 federal agencies)(FISRWG).

Harm To Biodiversity - Pesticides



- 7 million—approximate number of birds that die each year as a result of lawn care pesticides
- Only 1% of the half-million plant and animal species in the US are considered pests
- For one pest eliminated by pesticides, 1000 beneficial species are killed in the process
- The value of pollination to U.S. agriculture is estimated at \$40 billion per year
- Declining Honey bees are believed to be responsible for 80% of all pollination in the US
- Beetles pollinate about 88 percent of all flowering plants in the world.

Harm To Biodiversity - Habitat Loss



- Traditional development results in habitat loss, fragmentation – lawn habitat is now found in every geographic region of the country
- 1/4 of all species in the world are facing extinction in 50 years
- Habitat fragmentation and broken "nectar corridors", used by migrating pollinators such as bats, butterflies and hummingbirds, contain less food and often heavy pesticide applications

Harm to Biodiversity - Invasive Plants

- Exotic plants escape, invade, and out-compete native biodiversity (or biodiversity period) to create low-functioning landscapes

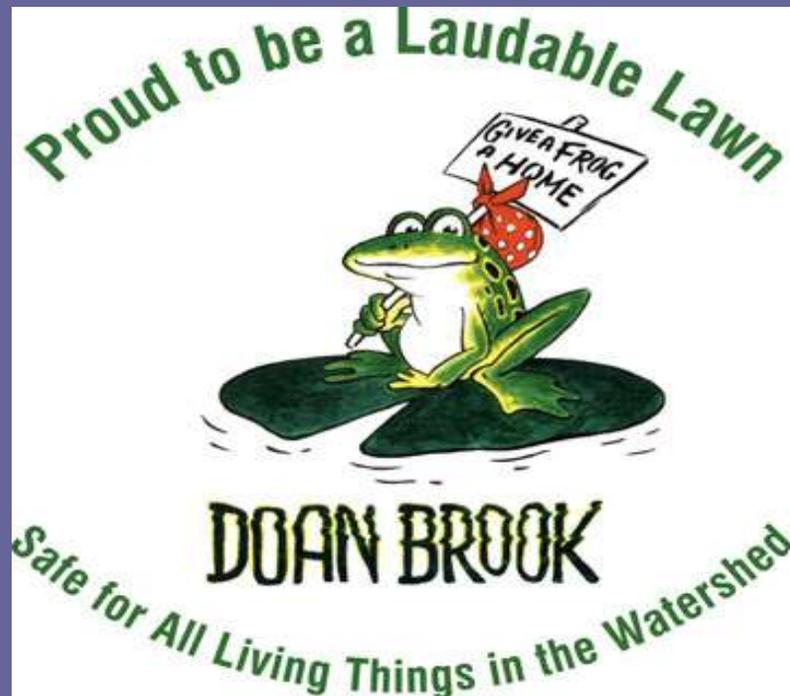
Garlic Mustard



Yellow Flag Iris



Impacts to Public Health



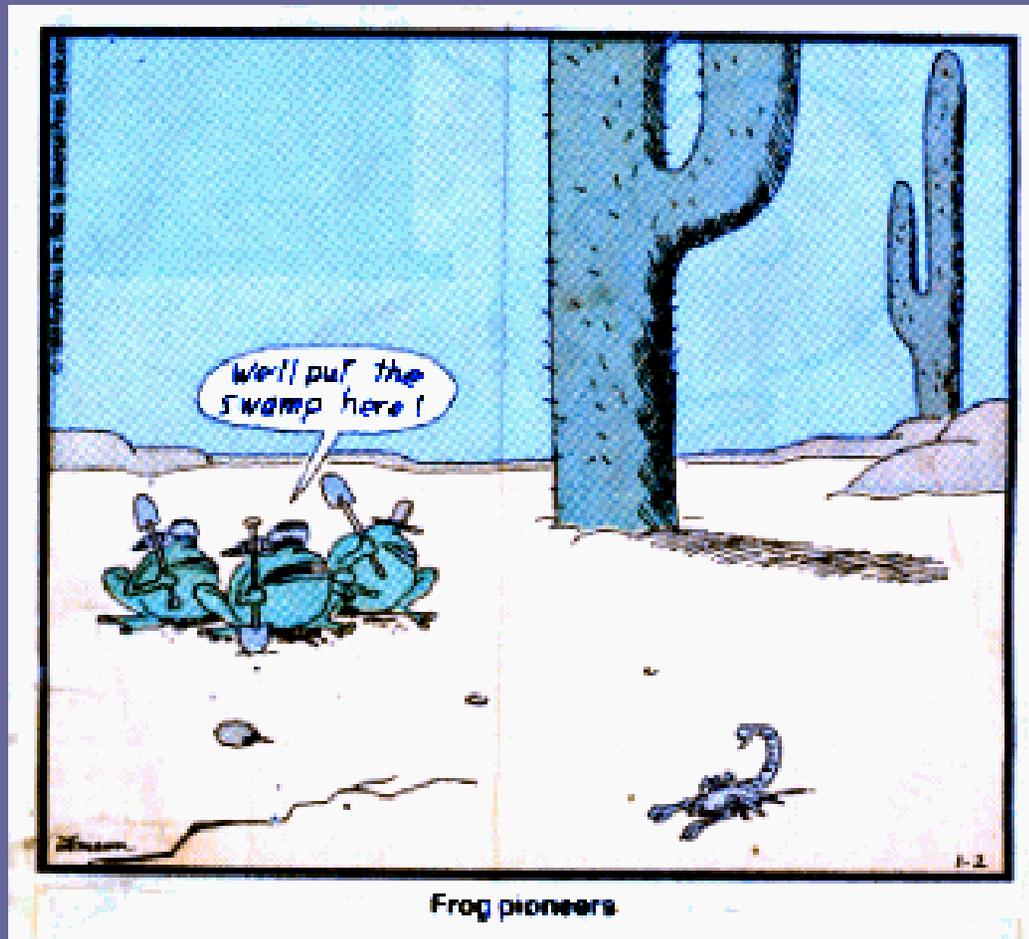
The incidence of childhood leukemia is approximately 6 1/2 times greater among families using lawn pesticides than among those who do not (US National Cancer Institute, 1987)

Aesthetics – Less to alight our 5 senses

- Duplicating the same landscape everywhere prevents the celebration of unique, regional floral and fauna
- Studies have shown that we feel better with trees:
 - Trees enhance community economic stability by attracting businesses and tourists.
 - People linger and shop longer along tree-lined streets.
 - Apartments and offices in wooded areas rent more quickly and have higher occupancy rates.
 - Businesses leasing office spaces in developments with trees find their workers are more productive and absenteeism is reduced. (Michigan State University Extension)



Time to Create a New Ethic for Our Landscapes...



“The design process begins with an assessment of the natural systems of a place—its landforms, hydrology, vegetation, and climate. Combining an understanding of building and energy systems with the site's natural flows of sun, wind, water, and vegetation, designers discover an "essay of clues" that suggests appropriate patterns for development of the landscape.”

--William McDonough

Our Community of Impressive Backyard Stewards

The McGraws were winners of the 2003 Laudable Lawn and Home Habitat Challenge. The three top stewards alone accounted for the following changes, based on 5 months and 71,340 square feet of yards:

- 6876 gallons of water saved
- 142,680 fewer pounds of nitrogen entering the watershed
- 262 fewer bags of yard waste going to the landfill





Beau Daane - Bratenahl
“my beloved wood chip pile--
I let it sit for 6 months to
prevent taking nitrogen out of
the soil. I found the poor
electric wire tree trimming
guys to get their wood chips...
it is a great mulch and it is
free!”



A Forest Garden "I love my orchard of apple trees, raspberries, blue berries, asparagus, various mints, and other seasonal veggies"



Kathy Smachlo - Shaker Heights "My goal was to transform this yard into a native plant menagerie, trying to put back into the environment plants that provide food and shelter for the insects, butterflies, birds, and yes, even the deer and rodents (food for hawks, you know). I also wanted to grow food for my family, friends, and if lucky even the food bank.



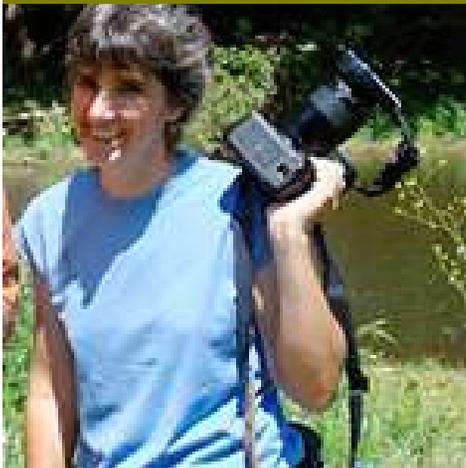


October 2004



July 2008

Judy Semroc - Uniontown "With 3.5 years, the garden filled in with masses of color and exceptional pollinator plants that serve to provide for a startling array of creatures"





Susan Kent - Cleveland Heights "On the tree lawn, I actually have to experiment with some "garden bullies" since it's strictly survival of the fittest, given dog traffic, winter salt, and summer drought! I call it "Darwin's Garden"



Mari Keating - Cleveland Heights

“We currently have a 440 gallon collection system behind our garages which we use exclusively on the (ever growing) organic vegetable gardens, strawberries, raspberry bushes and fruit trees”



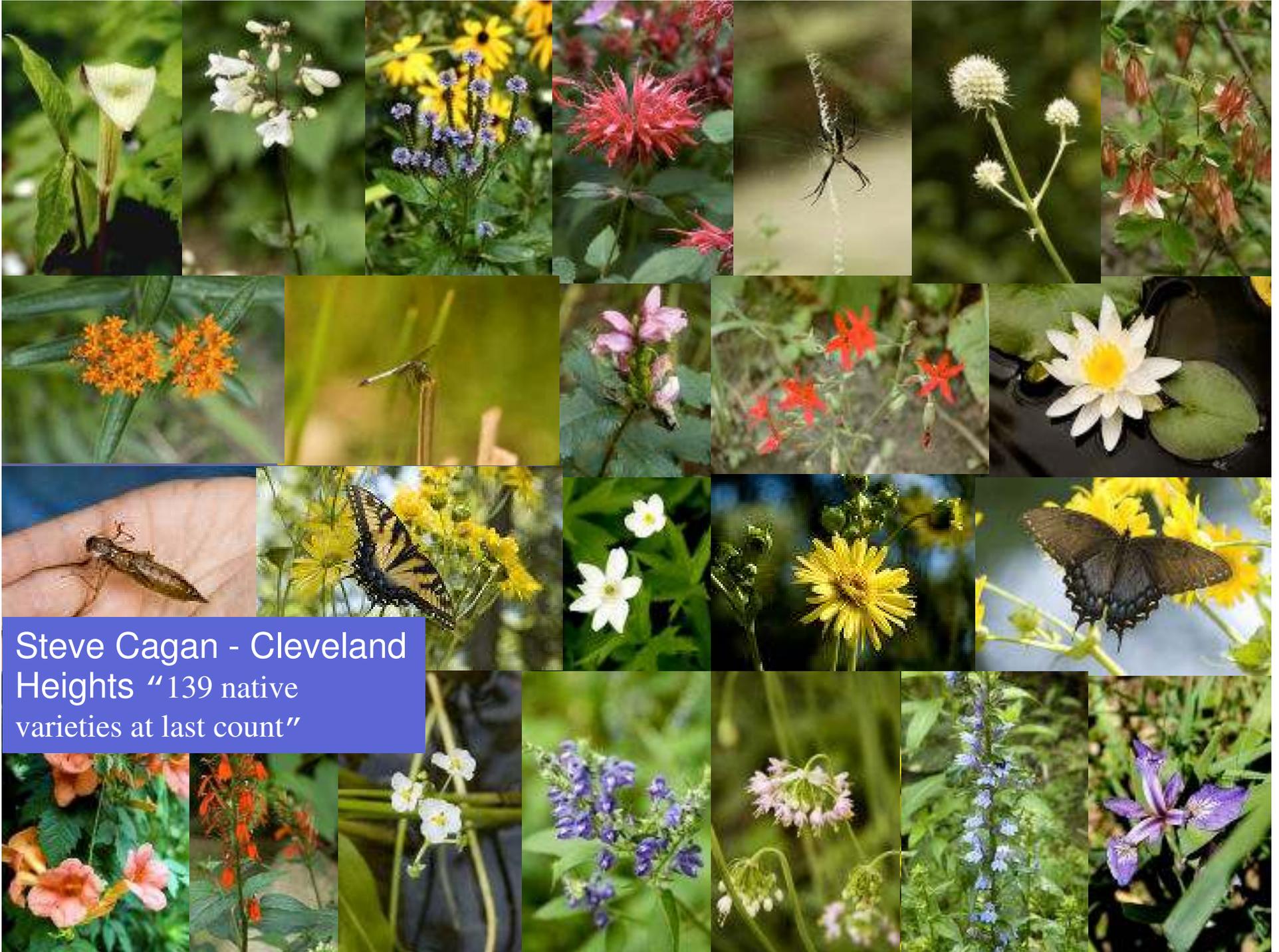
“I’m tempted to groan “what a lot of work!”, except that it did happen gradually, over time - inch by inch, row by row. Think Spring!”



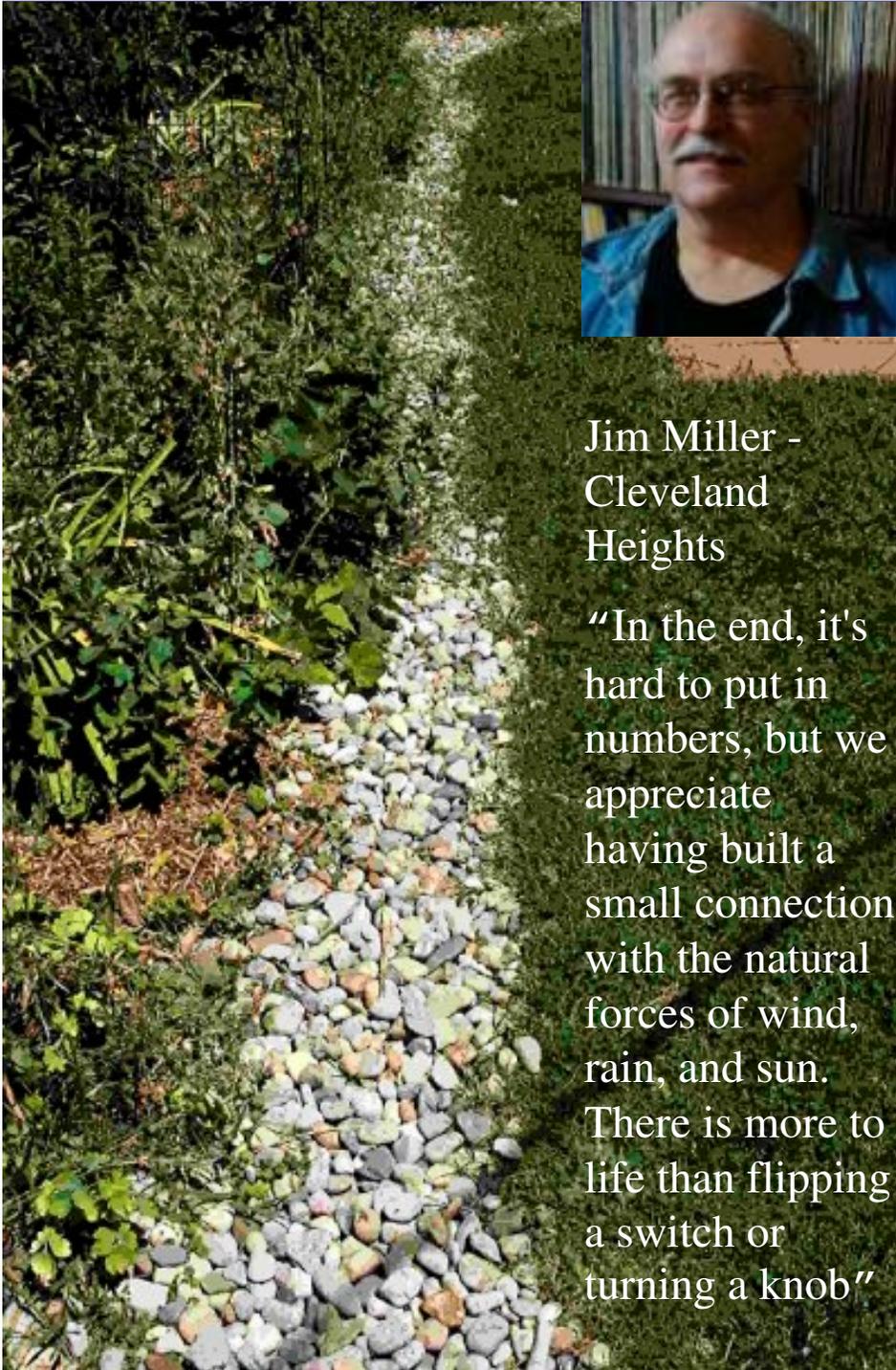
Jeff McIntosh - Ohio City "I burned through a couple of diamond blades on this job"







Steve Cagan - Cleveland Heights "139 native varieties at last count"



Jim Miller -
Cleveland
Heights

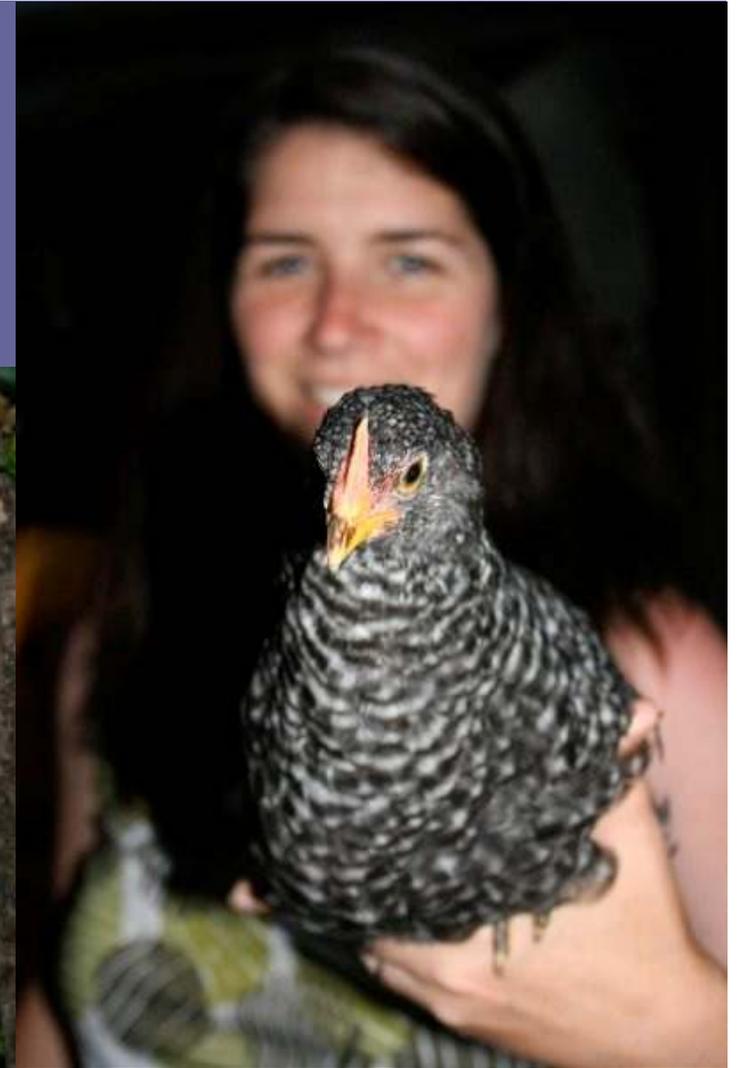
“In the end, it's hard to put in numbers, but we appreciate having built a small connection with the natural forces of wind, rain, and sun. There is more to life than flipping a switch or turning a knob”



Free Garden



Fran DiDinato -Detroit Shoreway
Neighborhood of Cleveland “Chicks are
now outside!!!” A new Cleveland ordinance
allows residents to keep chickens, ducks,
rabbits and beehives but not roosters,
geese or turkeys.





Jessie Jones - Bainbridge
"These frames contain atomic red carrots, purple early sprouting broccoli, redbor kale, de meaux endive, radicchio de traviso, minutina, tatsoi, batavian endive, danvers carrots, winterbor kale, tresfine endive, salad burnet, bloomsdale spinach, rapa, & cilantro"



“This was our New Year’s Eve Salad!”



Kyle Dreyfuss-Wells - Shaker Heights "We're hoping to be the first LEED Gold home in Ohio"



We named it the "Dandelion House," because we hope the ideas it embodies will spread like seeds on the wind.



HABITAT FOR HUMANITY - CLEVELAND “How does one of the city’s premier green builders, who produces universally designed, Energy Star rated, LEED certifiable, new and fully rehabbed homes, with all organic lawns and all indigenous plants to a standard of zero waste, while running the largest tool and construction materials recycling store in the state, get any greener?

By banning bottled water, eliminating wastebaskets, adding composting to our daily recycling, including a rain barrel and a raised bed garden for all new and rehabbed Habitat homes and providing very low-cost tools, seeds, stones, pallets and lumber to Cleveland’s emerging urban gardening movement!”





Bobbi Reichtell - Detroit-Shoreway
Neighborhood - Cleveland

"We are creating 2 new community orchards &
3 vineyards on vacant railroad property. First
we removed 18" of asphalt from 2/3 of the site.
Luckily we had a donated bobcat, dump truck
and experienced operator"





Veronica Walton - Cleveland
"One of the most surprising comments from a youth was... which end of the plant goes into the ground?"





“After showing a volunteer all of the weed types in a raised bed she picked every single chive as well. When asked, Did you notice the aromatic smell of the Chives when you picked them? She said yes, and the smell was so therapeutic I was motivated to do a good job. I lost my breath and a great crop of Garlic Chives”



Spread your wings,
share your gifts,
restore our land, air
and water

Thank You!

