Biodiversity for a Livable Climate
Restoring Ecosystems to Reverse Global Warming

June 26, 2017

Help the Urban Ecosystem: Start a Native Garden

Over an acre of native plants at a home in Lincoln, MA. Photo credit: Ecological Landscape Alliance

For many city dwellers, garden space is valuable - especially because it's highly limited. But it doesn't matter how much space you have; you can make a positive impact with just a few square feet. One way to make the most of any growing space is to focus on plants that most benefit the local ecosystem. This is where native plants come in: certain species attract a wider range of beneficial insects and birds, and thus help to increase ecological health and

Events

A Road Map to Scenario 300

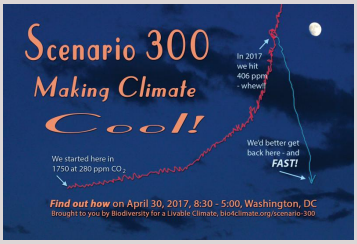
resiliency.

As changes in climate reduce the populations of many birds, insects and other beneficial wildlife, conserving the local ecology can help restore and protect critical habitat corridors for birds and pollinators. Native plants can be particularly helpful in urban settings. They provide protective shelter for animals, along with nectar for pollinators, and food for wildlife such as seeds, nuts and fruits. They also host butterfly caterpillars and block the advance of invasive exotic plants.

A native urban garden with pollinator-friendly plants. Photo credit: Wildlife Habitat Council

So what types of native plants might you grow? Consider the characteristics of the space you have available for planting. How much sunlight and water is there? Is the land sloped or flat, dry or marshy? And what surrounding materials and structures might influence your choices? While some native plants will tolerate many soil types, others require soil that is specifically rocky, alkaline or acidic.

For example, concrete materials leach lime and calcium salts into soils, so the plants most likely to survive in areas surrounded by concrete will be those that thrive in limestone-based soils. Sites that have been fertilized for many years may have high levels of nitrogen, phosphorus or heavy metals. To determine what to plant in your native garden, start by getting a soil test that can provide a full profile of your soil chemistry, including pH and nutrients, and soil texture. Meanwhile, you can check the soil yourself by considering these 10 simple points.



Biodiversity for a Livable Climate's staff scientist Jim Laurie will be teaching a 7-class course in the Greater Boston area on ways to use Nature's enormous potential: biology can draw carbon dioxide levels down to 300 ppm, cool the continents and eventually the oceans, and restore abundance to humans and millions of other species on earth.

Topics will include: The Big Picture, Grasslands, Freshwater Systems, Forests, Restorative Agriculture, and how Salt Water Ecosystems Return as Oceans Rise. The course will end with a summary discussion and class reports.

This engaging class should not be missed!

When: Classes start Monday, June 26th 6 - 9 PM EST. Participants can join in after the start date. Finish date will be determined by participants.

Where: 28 Rich Rd, Woburn, MA, 01801

Cost: $200 for full registration OR $40 per class

Here are some key characteristics to keep in mind when designing your urban native garden:

Local Climate and Wildlife

Native plants in the University of California, Berkeley Bee Evaluation Garden. Photo credit: Pacific Horticulture Society

First, what climate are you in? Do you reside in the humid continental climate of Boston, Massachusetts? The humid subtropical climate of Washington D.C.? Or perhaps, the warm-summer Mediterranean climate of Portland, Oregon? Once you've identified the larger geographical climate, you can get more specific and consider your regional and local microclimate. Native plant species are generally defined as those that existed in North America prior to European settlement. But a bit of research on the features of the current microclimate will help you select native species that have the best chance of thriving today.

Sunlight

Next, map out the patterns of sun and shade in your space in the morning, midday, and late afternoon. That will help you to determine where to place different types of native plants, as some species require more direct sunlight than others.

Physical Space

Register for the workshop here! For more information, please contact paula.phipps @ bio4climate.org

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About Biodiversity for a Livable Climate

Through education, policy and outreach, our mission is to promote the power of the natural world to stabilize the climate and to restore biodiversity to ecosystems worldwide. Collaborating with organizations around the

Urban native gardens come in many shapes and sizes. Photo credit: Pacific Horticulture Society

Now, look at the physical space you'll be planting in. Is the land flat or sloped? What type of soil do you have? Will concrete or other structural materials impact the balance of minerals in the soil? Here are some basic tips on physical spaces:

- Slopes facing north and east are cooler than those facing south and west.
- Tall trees and shrubs need more space around them, and many have very deep roots - so you may want to avoid planting them near walls or fences.
- In Mediterranean-like climates, areas with compacted soil, such as school grounds and parks, are good places to plant chaparral vegetation. Cover the site with 3 to 5 inches of shredded bark mulch, thoroughly soak both soil and mulch, then cast annual native plant seeds over the mulch and let the roots work their way into the soil.

Irrigation and Water Needs

globe, we advocate for the restoration of soil, and of grassland, forest, wetland, coastal and ocean ecosystems - along with the associated carbon, water and nutrient cycles - to draw down excess atmospheric greenhouse gases, cool the biosphere, and reverse global warming, for the benefit of all people and all life on earth.

Learn more about our ongoing projects and upcoming events and find additional information and resources at bio4climate.org.

A rain garden at Glencoe Elementary School in Portland, Oregon. Photo credit: WERF

Irrigation should be tailored to the drainage capabilities of the soil. Drip irrigation won't work in clay or other slow-draining soils. The plants you select for your space should match the watering regimen and long-term water availability. Native plants often require more water in the winter than in the summer. If you choose plants that develop strong, deep root structures, you can sustain your garden with less water than if your plants have shallower roots.

Also assess your soil's ability to drain. Most plants thrive in spaces where water thoroughly drains from a water-filled hole in about 10 to 15 minutes. Once they've adapted to the environment, native plants that are in an appropriate space typically don't require watering unless water becomes scarce in the winter or if the summer includes an exceptionally long hot spell.

Photo credit: Pacific Horticulture Society

You have many options as you design your native garden. Once you understand the characteristics of your space and choose the appropriate native plants, have fun with the process - you'll be playing an important role in conserving native plants and restoring urban ecosystems!

You can use this handy online tool to help decide which native plants to choose for your garden.

For additional information on designing a native

garden, check out these informative resources.

Carbon Farming Proves Profitable in Bismarck, North Dakota

Photo credit: Enrique Castro-Mendivil/Reuters

Industrial agriculture is often criticized for being an evil force of climate change. But in this article from the New York Times, Gabe Brown's family farm in Bismarck, North Dakota proves that we can use agriculture to our advantage - both ecologically and economically - in the fight against climate change.