



Ecological Gardens Newsletter

Summer 2005

<http://www.ecologicalgardens.com/>

*“Every country has three forms of wealth: material, cultural and biological. The first two we understand well because they are the substance of our daily lives. Biological wealth - fauna and flora - are also a part of a country’s heritage, the product of millions of years of evolution centered at that time and place.” Edward O. Wilson, *The Future of Life*.*

Summer has arrived in full force this year after a cool, wet spring. With it has come some exciting changes and opportunities. Guy Trombley is now working with Ecological Gardens. Guy has a PhD in anthropology and education in addition to considerable expertise in ecological systems design and implementation. Guy and I have been working together for several years teaching and learning about permaculture. In addition to residential landscaping we are now applying that knowledge on two new and interesting projects.

Ecological Gardens is partnering with Third Way Network, a local nonprofit, in an effort to combine affordable housing, community development and permaculture design. Third Way Network renovates and manages properties for affordable housing in the greater metro area. Our first project joint project is Hawthorne Village in north Minneapolis where we are currently implementing phase one of the project design. It has been exciting to design solutions that build natural capital and increase food and economic security at a village scale. The zone and sector¹ analysis for an urban village is quite different than for a suburban or rural property. In addition to wind, water, and light sectors we need to design for noise (freeways), pollution (lead contamination) and security (homelessness) sectors. The Hawthorne Village design includes berms and swales to help concentrate sunlight and water, a living fence with rose and blackberry that creates a security perimeter and provides food, a common social area, recreation and sitting areas, a greenhouse, fruit tree guilds and a cut flower garden as village micro-enterprises, and several rain gardens to capture and use water resources. We are just

¹ Sectors are energies moving onto a site – wind, water, sunlight, pollution, and noise. Zones are areas of activity at a site – welcoming, social (recreation, eating), production, and wildlife.

beginning our second project – Third Street Commons, a mixed income housing community a few blocks away.

This fall we will be working with the Buffalo High School student council and arts magnet program to design a courtyard space that will function as a social area, a performance area, and a classroom area. We hope to integrate the implementation activities with the school curriculum.

In all these projects we need to be as cognizant of the social and cultural dynamics of the design as well as the biological dynamics for them to function successfully.

Turning Problems Into Assets – Water, Water and More Water

Water has been a feature of many of our summer projects – incorporating rain barrels, rain gardens and saturation trenches. We began by focusing on rain gardens but it soon became clear that water management has to be analyzed for an entire site and implemented in a seamless way. The industry is not yet there and so people are faced with having to assemble many of the pieces themselves. We need gutter installers that are used to working with rain barrels, rain barrels available in different sizes that can be stacked to insure adequate water pressure and integrated with the overall watering system. One of our priorities this winter will be to partner with these businesses to build this infrastructure so that excellent, seamless systems are available for purchase.

The Beginnings of Citizen Science

The citizen science program is being assembled informally this summer with several customers conducting experiments with cover crops as alternatives to grass and mulch. One of the challenges is that the majority of cover crop research has been geared towards sustainable agriculture and is focused on high light annual systems. At Hawthorne Village we are doing trials of 6 different cover crops to determine their characteristics: Are they perennial or marginally perennial in zone 4? How do they respond to foot traffic, salt and drought? How easy are they to maintain? Are they beautiful? We will keep you posted on the results.

We are also doing site trials of perennial agricultural guilds² with the University of Minnesota Student Farm and several sustainable agriculture farmers. Through this process it has become clear that the plant community database has the ecological and human use information required to design candidate guilds but will need more economic information to insure a return on natural capital over time.

Compost Tea Update

The compost tea brewer is now operational and we are ready to begin site trials using different formulas. High-quality aerobic teas re-inoculate the soil with beneficial organisms. Different ecosystems require different organisms to support their respective plant communities. For more information (or) if you are interested in participating in a site trial, email Guy – trom0003@umn.edu or call Ecological Gardens 612.588.3942.

² A plant guild is a community plants that functions together to perform one or more ecological functions and over time becomes self-sufficient.

Multifunctional plants – Roses (*Rugosa rose*)

Plants perform many important ecological functions in the landscape as well as provide beauty, medicine, and food for humans and wildlife. Roses are native to many different ecosystems – prairies, woodland edges, swamps, and meadows. They range from 6' to 2' tall'.

Food

The fruit can be eaten raw or cooked and is rich in vitamin C. The flowers can be eaten raw or used in jellies and preserves. Make sure and remove the bitter white base of the petals. The seed is a good source of vitamin C and can be eaten after removing the seed hairs. A pleasant fruity tea can be made from the fruit or leaves.

Medicine

Traditionally rose leaves have been used in the treatment of fevers. The flowers act on the spleen and liver, promoting blood circulation. They are used internally in the treatment of poor appetite and digestion, and menstrual complaints arising from constrained liver energy.

Fragrance

The flowers have a clove-like perfume.

Windbreak

Roses can withstand winds and are a good hedge or windbreak plant.

Nurse Plant

Roses establish easily on difficult sites such as banks, fills, sandy soils, and salty environments.

Fortress

Roses are a good fortress plant with their sharp thorns.

Wildlife Food

The fruit is eaten by songbirds, mammals, and upland game birds.

Companions include borage (reported to increase rose growth), beets and chives (pest repellent border around roses), garlic (pest repellent for rose aphids), lupine, parsley (repels insects) lady's mantle (good groundcover under roses).

Warning – Deer often eat roses so if you plant in a deer-prone area make sure and include the companions. You may also have to use a hot chili pepper spray on the leaves.

Upcoming Events (not to miss)

- **July 27th – July 30th. 5th Annual Windy River Renewable Energy and Sustainable Agriculture Fair.** Morrison County Fairgrounds, Little Falls, Minnesota. The fair showcases local and regional innovations in renewable energy, sustainable agriculture, and green living. Ecological Gardens will be doing a workshop on Compost Teas. For more information visit www.windyriver.us.
- **August 11th – August 14th. American Community Gardening Association National Convention.** Minneapolis and St. Paul, Minnesota. Gardening in the Heartland: At the Water's Edge. The conference has over 50 hands-on workshops, 22 tours to Twin Cities community gardens and green sites, keynotes speakers, a film festival, and a program for children aged 7-12. Ecological Gardens will be doing a workshop on the Sustainable Landscape. For more information or to register online visit www.communitygarden.org.

We could use your help in designing more plant communities.

Are there problems in your landscape that you would like to have a plant community designed for?

Are there assets in your landscape - particular trees, water features, etc - that you would like to have a plant community designed for?

Send any suggestions or ideas to: paula@ecologicalgardens.com

Enjoy the summer!!

For information on upcoming events:

http://www.ecologicalgardens.com/upcoming_events.cfm

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