



ONE VACANT LOT AT A TIME

Creating Life-Bearing Spaces

by

Friends of the Trail

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Rough blazing star with monarch butterflies

What is a Life-Bearing Space?

A life-bearing space is one that provides food and habitat for a multitude of creatures.

Creating a life-bearing space involves removing invasive and exotic vegetation and reviving the neglected land with native plants. In time the space becomes a magnet for local and migratory birds, insects, and animals. It may not directly feed humans, like a vegetable garden or an apple orchard, but it will nurture the cycle of life that helps nature do its job in sustaining Earth's balance. Once the native plants are fully established the land becomes a living, breathing entity that continues to regenerate and reseed on its own with minimal tending.

The purpose of this booklet is to inspire like-minded folks who wish to create a natural, tall grass prairie habitat near them. We are not soil scientists or master botanists, nor do you need to be. All it takes is commitment, caring and a willingness to get your hands dirty. We hope our experiences and the lessons we learned help guide you in turning a vacant lot or backyard into a thriving, life bearing space.

This is our story...

The idea of restoring a patch of land came about while traveling around Israel in 1993. We met Reuven Josef, an ornithologist, who had turned a salt marsh on the northern outskirts of Eilat into a staging area for numerous species of migrating birds by planting fruit trees and seed-bearing bushes. Shortly after our return home, we went to the City of Minnetonka and with the help of its administrators we were able to secure a vacant lot kitty-corner to City Hall, flanked by a busy roadway and a bike path.

This rectangle of land had been long neglected, the soil rock-hard and littered with trash. The plants scratching out a life from its dry ground included leafy spurge, Canada thistle and ragweed. Because of the hardness of the soil we needed pick axes to break it up before we could begin planting.

Our vision was to grow natives and not to use any chemicals on the land. Most restored prairies are initially treated with herbicides to kill the weeds. In our minds, applying chemicals would damage creatures living

in the soil and poison the groundwater.

Many prairie plants and grasses are ground water purifiers with roots that extend from about five to fifteen feet underground. The depth of the roots help the plants withstand hot summers and subzero winters, and anchor the soil, helping to prevent erosion.

Initially we wanted color and beauty to flourish from the barren land, so we planted only prairie flowers: stiff goldenrod, blazing star and gray-headed cone flowers.

We were so enamored after seeing pale purple Monarda flowers blooming in a field off a highway that we spread its seeds throughout the lot. Little did we know that years later we'd be pulling it up to contain its aggressive tide from both reseeding and spreading root systems that would sprout new plants.

In those early years the city provided us with a trough of water, so we could keep young plants alive during drought times. The city also instigated autumn prairie burns, spaced a couple years apart. These burns help reduce the weed population, add nutrients that help build soil quality, reduce thatch build up and stimulate new growth.



Big Bluestem Grass

Because we were new to this, grasses were not a part of our original restoration plan. However, our vision of the prairie shifted when we visited the tall grass prairies of Schaefer Prairie near Glencoe, and the Minnesota Arboretum.

We were so awed by the sea of grace and strength of these native grasses, we immediately started planting them in our lot.

We tried a number of methods to introduce big and little bluestem grasses. We'd clear an area of weeds and seed directly into the soil, or transplant grasses that we started growing at our homes. One magical technique we found to be highly successful was seed balls.

Seed Balls

Seed balls are a simple way to sow seeds for habitat restoration. Their origin comes from Masanobu Fukuoka, a Japanese farmer, who developed this technique about 50 years ago and used it to sow seeds on his farm.

His idea was to encase seeds in clay where they would safely be out of reach of rodents, birds and insects until rains would dissolve the clay, leaving the seeds to germinate. There is no need to tear up land with plowing for this elegant solution.



A seed ball is made up of four components:

- 5 parts powdered clay
- 3 parts seed
- 1 part soil, or soil mixed with compost
- 1 part water (or more—add enough to hold the balls together)

A good time to sow them is in the dead of winter or early spring. In our area we spread seedballs in the middle of winter. As we toss them into the snow they sink in and remain in place until they are dissolved by melting snow and early rain the following spring.

A wonderful advantage of seed balls is that during drought years they stay intact, protecting the seeds from being eaten. Another benefit is that prairie plant seed remains viable for many years and encasing them ensures they will be there to sprout when the rains come.

We make about a thousand seed balls at a time, air-drying them in uncovered cardboard box lids.

It makes for a fun activity with friends who are willing to get their hands dirty.



The photos in this booklet were taken at our restored prairie.



Butterfly Weed



Compass Plant



Rattlesnake Master



Purple Prairie Clover



Indian Grass



Switch Grass



Cord Grass



Side Oats Grama

Weed Control

Over the years we have developed several coping mechanisms to control invasive plants. We have found all of these methods work well, especially when applied to the timing of a particular species.

1. Pulling the stalks out before a plant has a chance to produce seeds
2. Good old fashioned digging to remove plants by their roots.
3. Repeatedly removing top growth to stop a plant's ability to produce energy, forcing them to use up energy reserves stored in the roots in order to send up new growth. This makes them weaker each time and eventually they die out.



European Leafy Spurge

In spring the stalks are pulled out before the plants have a chance to form seed and left on the prairie to break down and return nutrients to the soil.

Brome Grass

We use a weed-wacker or lawn mower to cut it down in early spring before the native warm season grasses that emerge later are up. This has slowed it down giving native grasses time to grow to full height and strength. When we prepare a new area for planting we dig it out and remove the roots.



Canada thistle

A large patch was cut down and the area covered with burlap bags which prevented most of it from regenerating. Any plants growing back through burlap were pulled out. After repeating this a few times the thistles were gone. Smaller colonies were pulled out as they began to flower. At that time of year they are at their most vulnerable, spending most of their energy getting ready to produce seed and then replenish their energy reserves. Any new growth after that was always removed.

Bird's Foot Trefoil

Before it produces seed we dig it out and remove the roots.



Burlap Bags

Another method for weed control is to use natural fiber burlap bags. Peace Coffee gave us hundreds of bags that we used for this purpose with young transplants. The bags were laid down and three planting holes, widely spaced apart, were cut in each bag. After planting and watering, mulch was spread on top. Being made of natural fiber, the burlap bags decompose over time and there's no need to remove them. Burlap bags woven from synthetic fiber will not work for this.



Over time we expanded the scope of the prairie. We enlarged it to include an adjacent wetland area— perfect for joe pye weed, boneset, swamp milkweed, queen of the prairie and blue flag irises.



Today the prairie is about an acre in size and is a source of food for birds, beneficial insects including bees, dragonflies and butterflies, and small mammals. Ducks and deer have nested among the grasses and forbs, and it has become an important habitat for pollinators.

The prairie has now reached a point of aliveness and vibrancy that has created a life of its own, rich with color and beauty that annually regenerates and reseeds itself with manageable tending on our part.



Recommendations for Startups

- Start small, expand incrementally.
- Give the prairie time. Top growth will be slow for the first few years. Most prairie plants begin life by developing strong, deep roots first.
- Have no expectations.
- Let nature teach you.



- Use only local seeds and plants and buy from reputable sources. A local native plant nursery can give advice on what to plant in your location and may be able to refer you to others who have already done this.
- Know the general habitat needs of the plants. Some require moist soil, some are for dry land, others like rocky, sandy or wet soil.
- The greater the diversity of plant species the healthier your prairie will be.
- The website of the Department of Natural Resources (DNR) in your state can offer a wealth of information.