

The Outside Story

newsletter for natural landscapers

Vol. 6 No. 4

July - August 1993

One Dollar

Prairie plants evolved through adaptation to harsh climate

To appreciate prairie, one must experience and understand the environment that created it. Drive across I-80 in August. Stop somewhere just west of Lincoln, NE, and get out of your car. Climb to the top of the roadway embankment and walk a short distance into the fields. Sun will beat down upon you in fiery fury as one hundred and four degree heat waves writhe and wriggle dizzily across the land. Desiccating blasts of oven wind will parch your lips and ping your skin with sharp dust arrows. Grass rising, falling, tossing in ocean-like waves will churn your stomach and sway your balance like sea sickness. Yet in this unbearably hot and dry environment several hundred beautiful plants thrived and multiplied in the ecosystem we call prairie.

Repeat your visit at the end of January. Now howling gales and biting winds sting and numb you with wind chill factors of seventy degrees below zero. There's no place to hide and nothing to block wind or even hold snow as an insulating blanket over soil.

Where are the plants? Roots, rhizomes, bulbs, and growing tips (which is over 60% of the plant) are all safely protected in soil away from temperature extremes. Stems and leaves which are above ground make up the smaller, more expendable part of the plant. This is the most important adaptation of plants to a harsh, prairie environment.

Four factors shaped the great American prairie which stretched in a rough triangle from Northern Mexico to southern Canada along the eastern side of the Rocky Mountains, narrowing eastward into the prairie peninsula of Illinois, Indiana, and Ohio.

The first was a drier climate which occurred over millions of years as continental plates collided causing the formation of mountain ranges and the breaking away of land masses. Ocean currents and rain patterns changed, the earth cooled, and inland oceans retreated. By 25 million years ago, the climate in central North America had become dry enough for the first grasses to appear. Twenty million years ago,

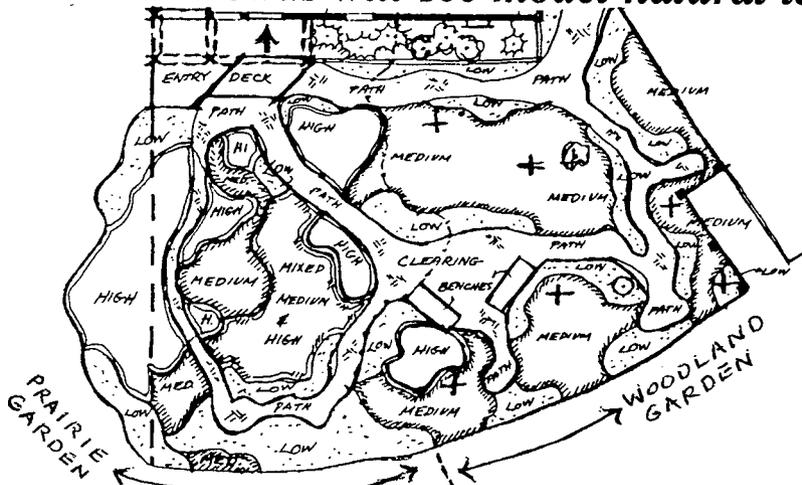
prairies were well-established.

Prairie plants developed an alternative form of photosynthesis, C4, which allows them to be active at higher temperatures and require much less water. Plants using the system use carbon dioxide more efficiently and have smaller stomatal (pore) openings which cut down water loss.

Other ways prairie plants adapt to climate is with small or finely cut leaves that reduce evaporation. Hairy surfaces help too by reducing the air flow, shading the leaf, catching and holding dew or condensing water evaporated through the stomates. Having leaves
(PRAIRIE PLANTS, page 3)

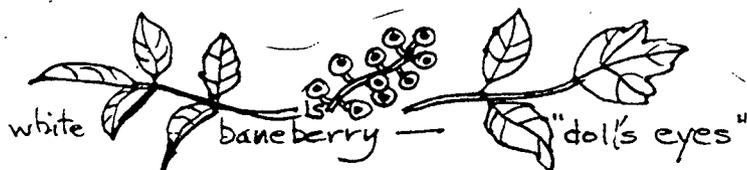


State Fair crowds will see model natural landscaping project



Prairie and woodland areas appear in the DNR/Wild Ones State Fair plan.

A demonstration "front yard" using native prairie and woodland species has been the goal of the Wisconsin Department of Natural Resources for their state fairgrounds area. Although DNR workers had put in some wild plants in previous years, it was Bill Volkert of Horicon Marsh Wildlife Area who asked last fall if Wild Ones would be interested in helping develop a permanent place within the DNR compound to be ready for the 1993 Wisconsin State Fair. We knew a well-done project would certainly educate the
(STATE FAIR, page 10)



Writer notes preoccupation with weedless, mowed lawns

We in Wisconsin are obsessed with grass.

Every house must have a lawn, and not just any lawn will do. It must consist exclusively of grass and be thick and uniformly trimmed. There must be nary an occasional broad-leaved plant. Every plant not a grass is deemed a "weed," to be annihilated. Even some grasses are denounced as "weeds," to be poisoned along with the broad-leaved variety.

In Wisconsin there is only one community-sanctioned way to treat one's yard: to grow grass and keep it mowed. The need to mow and mow again has become a sort of group-think in Wisconsin. If your lawn doesn't conform, you're a bad citizen. Never mind if you cheat on your income tax or beat your wife; it's the look of your lawn that matters.

A drive through any city or suburban town reveals how successful this social pressure has become. Trimmed expanses of grass - and nothing but grass - stretch from yard to yard. Is it beautiful? Not very. It's sterile-looking, monotonous, boring. It might as well be AstroTurf.

Our infatuation with grass is achieved at a tremendous cost. Caring for grass consumes vast quantities of a homeowner's time and money. In spring, each homeowner rakes up thatch. Then the lawn is fertilized so it will grow thicker and faster.

Lawns are zapped with pesticides to kill insects. Broad-leaved plants are zapped with herbicides. Both applications send toxins into the air, poisoning birds and small mammals, as well as into the ground water and streams, poisoning fish and other aquatics.

Pesticides also waft volatile organic compounds into the air and add to our ozone problems. In poisoning the lawn, we're poisoning ourselves and the rest of the world.

As spring advances, the din of power mowers pollutes the air. The more luxuriant the grass, the more frequent the mowing. Exhaust fumes from gasoline-powered mowers cast a haze over the landscape, adding significantly to atmospheric ozone levels. Burned gasoline increases the carbon dioxide load on the atmosphere, thus increasing the

dioxide overload, and the threat of global warming.

We're hostage to grass all summer. Even fall doesn't bring relief. Fallen leaves need to be raked, or the grass beneath gets smothered. Only winter brings respite from the other-wise insatiable master grass has become.

We've succumbed to the sales pitch of herbicide and pesticide manufacturers, the advertisements of mower salesmen and the pressure of lawn specialists.

Deep down, Americans really do not like grass this much. The places that speak to us as beautiful are the great parks and private estates, rich in native woods, where an understory of native vegetation complements the trees, provides a nurturing home for the next generation of them, and offers protection for birds and mammals.

Mowed paths traversing the woods may have appeal, not because the mowed path is intrinsically better or more beautiful than the woods, but because the path enables us to become at one with the woods more easily.

In other parts of the world, grass does not dominate people's lives. In England, for example, hedges and fences at street level provide privacy. Beyond the hedge, each homeowner can do what he or she wants with the yard: plant flowers and shrubs, or build stone courtyards.

A "weed" is defined by ecologists to be a non-native plant that aggressively takes over a native landscape because it has few natural enemies at that site.

Purple loosestrife in the United States is a weed. Buckthorn is a weed. Spotted knapweed is a weed. But a strange thing has happened: In Wisconsin we have turned lawn grass into an ecologist's "weed." - Mary Ellen Johnson

Mary Ellen lives in Racine and is involved in saving prairie remnants. Her thoughts here first appeared in *The Milwaukee Journal's* "In My Opinion" column. Used by permission.



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(PRAIRIE PLANTS, page 1)

close to the ground where air flow is reduced and they are shaded by other plants is another way. Having no leaves at all, growing all together in a clump, having wide-spreading fibrous roots or deep tap roots are other ways.

The second factor was the thick covering of rock and soil debris left by glaciers. Clay particles in this young soil affects its fertility, texture, and ability to hold and release water. Many, like loess (extremely fine wind-blown particles of silt from glacial deposits) are very droughty. Prairies are located almost exactly where there were once glaciers or where glacial debris washed or blew eastward from mountains down into the great plains.

Thirdly, fire is an important factor in prairie development. Being deep-rooted perennials, prairie plants aren't hurt by having their upper parts burned. In fact, if fire is suppressed, they lose vigor and fail to flower. Fire returns nutrients to the soil in the form of ash and reduces the dense overburden of plant debris so shoots can reach sunlight.

(PRAIRIE PLANTS, page 6)



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Lorrie's Notes . . .

Naturally native. . . What's in a title?

What's in a title? *Requiem for a Lawnmower* is one to take home. This small, hard-cover book is a collection of short essays on easy gardening with native plants. The author, Sally Wasowski, is a southern woman with a snappy sense of humor embroidering large doses of common sense. Hers is a read-aloud book.

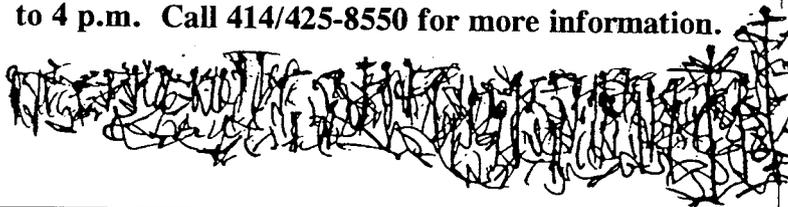
Ignore her species suggestions though. Those that she works with are too southern for us, and when she gives examples for our section of the country, any of the native plant nurseries in Wisconsin can give better advice. You need Sally to tell you why you should change your yard management practices, why use natives and how to use them.

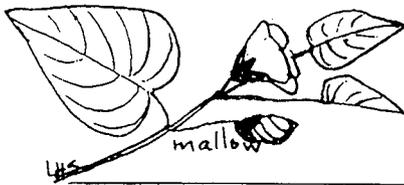
Sally writes as if she were speaking. One wishes one could hear her give a lecture in her gutsy, fearless style. I've been reviewing landscaping books for the Schlitz-Audubon bookstore and have been betrayed by book titles. I've mistaken "nature" or "natural" for NATIVE! Wasowski is also distressed by this and uses two examples: Ken Druse's *The Natural Garden* and Jeff Cox's *Landscaping with Nature*. She suggests looking at the illustrations, noting that many of the naturally arranged plants are a hodge-podge of aliens and cultivars, which would die without human intervention. I was shocked by the flagrant use of hosta. In one photo it was insultingly positioned among beautiful wildflowers commonly found in our woodlands. In another, there was a circle of hosta protecting a tree trunk from lawn maintenance machinery. What is so attractive about this species from another continent that landscape architects and their imitators can't be weaned from? Fortunately, *Noah's Garden* doesn't have photographs or I might never have read it. Sara Stein speaks of her hostas among the oak leaves. Horrors! Why not hepaticas, that classical gorgeous companion plant commonly found in an oak woods? Allowing hosta to grow on her land defied the philosophy so competently expounded in the first 234 pages of her book. (See *The Outside Story*, p. 3, May-June 1993.)

Sally Wasowski is a designer who is first and foremost a plant person and an environmentalist. "I belong to the school that believes a natural landscape should be composed of only those plants that would have naturally occurred on that site. That means native plants combined in the way that Mother Nature arranges them." Her last essay is entitled, "To Save the Planet, Save the Plants." Bless her dear heart! - Lorrie Otto

Lorrie has been the subject of many books and articles herself. Thomas Christopher who is writing *Waterwise Gardening*, which is due to be published next spring, mentioned her influence in contemporary gardening in a recent public radio broadcast.

Journey back in time to the Tallgrass Prairie Days at Wehr Nature Center on July 24 and 25 from 10 a.m. to 4 p.m. Call 414/425-8550 for more information.





Couple become activists when village cuts their berm plants

Last summer the Village of Germantown cut down sumacs on the berms behind Judy and Curtis Crane's home where the couple were trying to establish natural landscaping. The area had been planted with nearly 20 types of native grasses as well as many shrubs and trees.

The current village ordinance makes residents cut any vegetation over 12 inches, if it is considered a "weed." If the village cuts it for them, residents are charged an \$80 per hour fee. The Cranes say that their landscaping was cut without any court order or due process, in fact, while they were away from the house for a few minutes.

"I always had a respect for nature and natural areas," Curt Crane said in an interview in the *Germantown Banner Press* (May 27, 1993). "But the incident with the village caused me to become more of an activist. Nothing is more stimulating than having someone come onto your property and cut it."

Since the incident the Cranes have been involved in a year-long debate with Germantown over its weed laws. According to the article, the village has developed a new weed ordinance which would allow residents to grow lawns over one foot in height if they contain wildflowers and grasses native to Wisconsin. A provision in the ordinance requires a permit be obtained for any natural landscaping. The permit would be granted only if 51 percent of property owners within 200 feet of the applicant's property approve.

Curtis says natural landscaping has many advantages because there is less water usage and soil runoff than with

Was he an 18th century natural landscaper?

William Paca signed the Declaration of Independence and was a governor of Maryland. He also built a Georgian-style brick house with flanking wings and connecting hyphens that was the first of its kind in Annapolis in 1763 when he married wealthy, young Molly Chew. His colonial "pleasure garden" was probably planned at the same time as his house and was influenced by gardens he had seen while visiting in England. Landscape archaeology has shown it to have formal sections with roses, holly, and boxwood; kitchen gardens with herbs; and on two lower terraces more informal areas - a stream, a pond, and a wilderness garden with springhouse, cold bathhouse, and a pavilion from which visitors could view the garden and the Chesapeake Bay. In William Paca's day creating a wild area in a formal garden was a very, unusual thing to do - especially in a town garden - as the idea was just coming into vogue on English estates.

The restored garden is now open to the public. The horticultural staff propagates native plants to teach about plants used in the 18th century. - from *Historic Preservation*, July - August 1993, "Buried Treasures", pgs 68 - 71.

traditional lawns. If only native species are grown, plants don't need chemicals. Natural landscapes will be the dominant future type because of their benefits. He feels most residents want freedom to choose their own landscape.

Green Bay member establishes prairie on vacant lots

Dr. Jack Swelstad, a Green Bay surgeon, is creating a beautiful prairie section-by-section on four acres of vacant lots surrounding his country home in Hobart. The lots had stood unsold and neglected until Jack bought them.

In 1987, he and his wife, Marge, heard Neil Diboll speak and two years later they began planting their own prairie with Neil's advice. (For pictures of other prairies Diboll has done, see the August 1993 issue of *Midwest Living*, "Prairie Garden Primer," pages 64 -68.)

According to an *Green Bay Press-Gazette* (Sunday, April 11, 1993), Jack follows a four-step process when he starts each new area. He sows grass seed, then wildflower seed. Also he sows a cover crop of oats or rye, and buckwheat to attract bees. This creates a canopy for tender shoots and helps to keep down weeds. Finally, he mulches to help hold in moisture. "It's something that will evolve over several years. The seeds might not even germinate for the first year or two. But in four or five years, it's going to look like a prairie." He is trying to have all three types of prairies on his land: wet, dry, and mesic (intermediate).

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The Inside Story

CUP-PLANT

(*Silphium perfoliatum*)
Composite or Daisy Family

OTHER NAMES: Ragged Cup, Rosin Weed, Indian Cup, Akundamo, Rakeniozhu.

HABITAT: Open woodlands, meadows and prairies – wet to medium dry.

DESCRIPTION: A tall, vigorous plant with smooth, square stem and rough upper leaves surrounding the flowering stalk. The yellow flower heads are numerous, about 2 to 3 in. across with 20 to 30 rays. Native to the midwest. **Height:** 4 to 10 ft.

FLOWERING: July to September

COMMENTS: A University of Wisconsin-Madison researcher says, "Cup-Plant may become an important perennial forage crop in Wisconsin because it produces high yields, has great nutritive value and grows well in wet soil conditions that other forage crops can't tolerate."

College of Agriculture and Life Sciences Forage Agronomist, Kenneth Albrecht and Walter Goldstein of the Michael Fields Agriculture Institute in East Troy have been studying Cup-Plant as a possible perennial alternative to corn silage. On marginal land to which alfalfa isn't adapted, Cup-Plant may serve as a viable substitute. "The exciting thing about this plant is that it's equivalent to high quality alfalfa harvested at late bud or early flowering," Albrecht says. According to laboratory estimates, Cup-Plant is low in fiber, which is important for digestion by dairy cows; and it is high in crude protein, which is important for milk and meat production. However, the plant still needs to be tested by actually feeding it to livestock.

Albrecht says, "The major potential advantage of Cup-Plant is its long lifespan; in the wild the plant can live 20 years or more. Alfalfa, on the other hand, lives about 3 to 6 years in Wisconsin, depending on the location and management." Albrecht goes on to say, "One problem with the plant is that it takes a year to establish before the first crop can be ready for harvest." More research is planned to develop a companion crop that would supplement income during that first year, without interfering with Cup-Plant establishment.



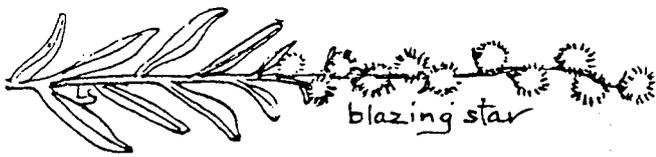
MEDICINAL USE: American Indians used root tea for lung bleeding, back or chest pain, problems of women, and to induce vomiting. They inhaled its smoke for head colds, neuralgia and rheumatism. Historically, the root tea was used for an enlarged spleen, fevers, internal bruises, debility, liver ailments, and ulcers. Chewing gum from this species helped to prevent vomiting, especially during pregnancy.

NAME ORIGIN: The **Genus Name**, *Silphium* (Sill'fi-um), comes from the Greek word "silphion," a plant of the Carrot Family that was used as medicine by the Greeks. In 1753, Linnaeus transferred the name to this genus. The **Species Name**, *perfoliatum* (per-fo-li-a'tum), means "stem growing through leaf (perforating it)," which is exactly how it appears.

The Chippewa Indian name, Akundamo, means "watcher or spy." The Winnebago name for this plant, Rakeniozhu, means "weed that holds water," in reference to the cup-shaped junction between the leaves and the stem.

AUTHOR'S NOTE: Several clumps of this plant are flourishing on our dry, gravel hillside in Sheboygan County. One of the clusters is at least 9 ft. tall. Since all the data I've uncovered states that it prefers a moist situation, ours must have hit an underground aquifer. The plant also spreads, so it is possible to take sections of these clumps and transfer them to another spot on your meadow. When the flowers are ripe in fall, many species of birds love them. Sometimes the plant blossoms are literally covered with birds dining on the, obviously delicious, seeds. The little cups that are formed at the leaf and stem juncture are favorite watering dishes for butterflies, birds, miscellaneous insects, AND chipmunks and squirrels. Yes, I have seen both of these critters climb the stalks and enjoy a few laps of refreshing water on a hot summer day. The Cup-Plant is a very important species in our meadow. It would be hard to imagine not having it, not only because of its stately beauty, but for the various creatures it attracts.

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(PRAIRIE PLANTS, from page 3)

Prairie soil is enriched and fertilized not by the decay and decomposition of leaf litter as on the forest floor, but by the death and decomposition of underground parts where the greater percentage of plant material resides. Other beneficial effects of burning prairie are to control and eradicate invading woody plants and alien weeds, and to allow sunlight to reach the soil and warm it up in the spring so that plants can resume growing sooner.

The fourth factor influencing the development of prairie was the billions of large herbivores which roamed all over and ate the prairie plants, causing them to develop strategies designed to discourage grazing. These included having their growing points extremely close to the ground so they may be clipped off on top and keep growing like grass. Having coarse, rough, bristly, thorny, or hairy surfaces is another way. It is all of these different shapes and textures of prairie plants that gives them their charm and delight in the garden landscape. Bright flower colors attract the myriads of insect pollinators available throughout the growing season. Having thick aromatic, bitter, or sticky sap also works to retard evaporation and discourage tasters. Many prairie plants are of economic or medicinal importance because of this factor. Wild quinine (American feverfew) was used as a malaria treatment, bonesets and cone-flowers were also important drugs, and most milkweeds contain drugs that can kill cancer cells.

Developing a prairie garden is a way to learn about these interesting plants and their adaptations. When I think about the Illinois tall grass prairie and what plants I would put in my garden to represent it, two dominant grasses stand out. These are big blue stem, *Andropogon gerardi*, and Indian grass, *Sorghastrum nutans*. They must be part of anyone's prairie restoration or garden if one wants to establish the essence of what a tall grass prairie is really like.

Big blue stem grows from four to ten feet high in Illinois depending on the fertility of the soil and the amount of rainfall during the growing season. Since it is warm season (C4) grass like most prairie grasses, it does not begin to grow until the soil temperature is 60 degrees in late spring. Throughout late June, July, and early August it is about knee to thigh high. In order to bloom (late August through September) it shoots up to six to ten feet and spreads its short three to five branched dusty-purple spikes called "turkey feet" to the wind. As it lengthens its stem, dark blue nodes and purple internodes begin to show, and big blue stem goes into its fall season blushing shades of purplish-red which it retains, although more subdued throughout winter.

Indian grass has a similar growth pattern, but is usually shorter (three to five feet). Its inflorescence is a long, feathery plume of brassy brown, and its late summer and fall colors are shades of copper and bronze which fade a little in winter. Even in small gardens I would recommend these grasses for their lovely colors and textures, because they help to fill in between and hold forbs up, and because they are pyrogenic fuels for the fires which are so necessary for the life and health of prairies.

A third tall prairie grass is switch grass, *Panicum virgatum*, which is usually about three to six feet tall. Its inflorescence is a wide-open airy panicle which gives a fine, lacy look to the garden. Its fall and winter color is a subdued pale straw color making a nice contrast to the more intense grasses and darker forbs of the prairie.

Three medium-sized grasses are my favorites for the prairie garden too. Remember, part of the charm of prairie is its diversity and many contrasting shapes, colors, and textures.

Little blue stem, *Andropogon scoparius*, has to be my all-time favorite. In Illinois, it usually grows in bunches or clumps about two to four

feet high. In September and October it turns a beautiful red and tosses its silvery-plumed seeds on the wind. It holds this deep color all winter, unlike other grasses.

Equally lovely is the two to three feet tall prairie dropseed, *Sporobolus heterolepis*, which should be used more often in landscaping. It grows in a swirling fountain of fine, hair-like leaves. When it begins greening up after a spring burn it looks like little green porcupines. In mid-summer it is a lush, radiating, light green mound. In August and September arching, blooming panicles waft their intoxicating fragrance of hot-buttered popcorn across the yard. Most autumns it takes on a subdued brassy color, but during drought years, burnished reddish-gold. In the months before burning, it looks like a wind-swept wig, or seaweed-covered rock.

(PRAIRIE PLANTS, page 7)

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(PRAIRIE PLANTS, from page 6)

A third grass I like is vanilla grass, *Herachloe odorata*, called hold grass by Native Americans. Unlike all the other prairie grasses, it is a cool-season grass, as is Kentucky blue grass, which begins its growth early in spring and continues late, even into winter. It goes dormant in the heat and drought of summer. It is only about one to two feet tall and blooms in May with short, brassy, oat-like florets. It spreads by rhizomes and thus can compete with Kentucky blue, quack, and brome grass, three banes of prairie growers. But the main reason why I like it is its link to the culture of Native Americans. To them, plants which produced odors and smoke had religious meaning and were a way to communicate with the spirit world. Every year I cut bunches of holy grass and consecrate my home with its vanilla incense.

There are many colorful forbs to enhance the prairie garden. Almost all are deep-rooted, long-lived, warm-season perennials. Here are my favorites:

The compass plant, *Silphium laciniatum*, and prairie dock, *Silphium terebinthinaceum*, are so uniquely part of Illinois tall-grass prairie that they come to mind right away. Prairie dock, without a doubt, is the largest plant on the prairie with some towering 15 feet high, with leaves like a baby elephant's. How is it able to afford such extravagance in a low-water, evaporation-high environment? The answer is its immense tap root. Seedling docks I transplanted had one leaf four inches by three quarters inch, but five to six feet of root. Is it any wonder these plants can survive several years of bulldozing? What megalithic roots those hundreds of year-old plants must have!

All of the *Silphiums* have rough, sand-papery leaves. This roughness helps conserve water by reducing wind speed over the leaf, shading the leaf, and helping to trap water vapor. It may also help discourage herbivores from eating the plant as does the thick, turpentine-like sap. All of the leaves are

basal and they are turned edge-wise to the sun to keep from getting too hot. This phenomenon of pointing leaf edges south to the sun is responsible for the name "compass" plant. In addition, the compass plant leaf is deeply cut, thus removing extra surface area and reducing evaporation loss.

It never ceases to amaze me when I walk in the prairie on a hot summer day when the temperature may be 100 degrees and the prairie dock leaves are 52 degrees. Touch one and see. The pioneers knew. They often cut a dock leaf and tucked it in their hats to keep their heads cool.

Flowers of the compass plant and prairie dock are yellow-rayed and sunflower-like. They are born in July, August, and early September. Compass plants have bigger flowers with bristly-looking bracts on an unbranched stem. During the winter the dark blackish-brown leaves of the dock and compass plant rattle and rasp against the delicate grasses, and birds enjoy eating the seeds.

One of the most beautiful plants is the pale purple coneflower, *Echinacea pallida*. It stands about three feet high and blooms in June and July. It is in the sunflower family and has white, pale pink, or rose-colored rays that droop below the dark, wine-colored, bristly center cone. The pollen of the disk flowers can be orange, pink, or white. I particularly like the variety that comes from propagating wild seed. I have every possible combination of petal and cone color. The whole plant is covered with stiff hairs and the leaves are linear and mostly basal. The seeds are slow to ripen and should not be collected until the first of November. In winter, the dark, bristly cones hold a puff of snow.

In early spring, almost before anything else is even up, the pasque flower, *Anemone patens v. wolfgangiana*, pushes out of the ground. The large pale lavender sepals masquerade as petals around a circle of yellow-pollened anthers. It is cool, pastel flower, making a tentative but tenacious start of the growing season. Silver hairs insulate

the plant against April's cool winds or late snow flurries. The parabolic flower face focuses the sun's rays to heat the center of the flower. *Pasque* refers to Easter when it is often in bloom. Deeply dissected leaves unfurl after flowers.

By May when all the other plants begin to grow and bloom, the pasque flower stands about a foot tall, old and gray-headed, casting its long, silver-bearded seeds on the wind. Native Americans revered it as the first spring flower, testing the weather, and finding it okay to bloom, then encouraging all other flowers to follow. They are easy to grow from seeds which should be planted immediately when collected at the end of May and do best in well-drained, gravelly soil. Germinating quickly, they grow large enough to produce one bloom in the second or third year and may produce more than 20 blossoms by the fifth year.

(PRAIRIE PLANTS, page 12)

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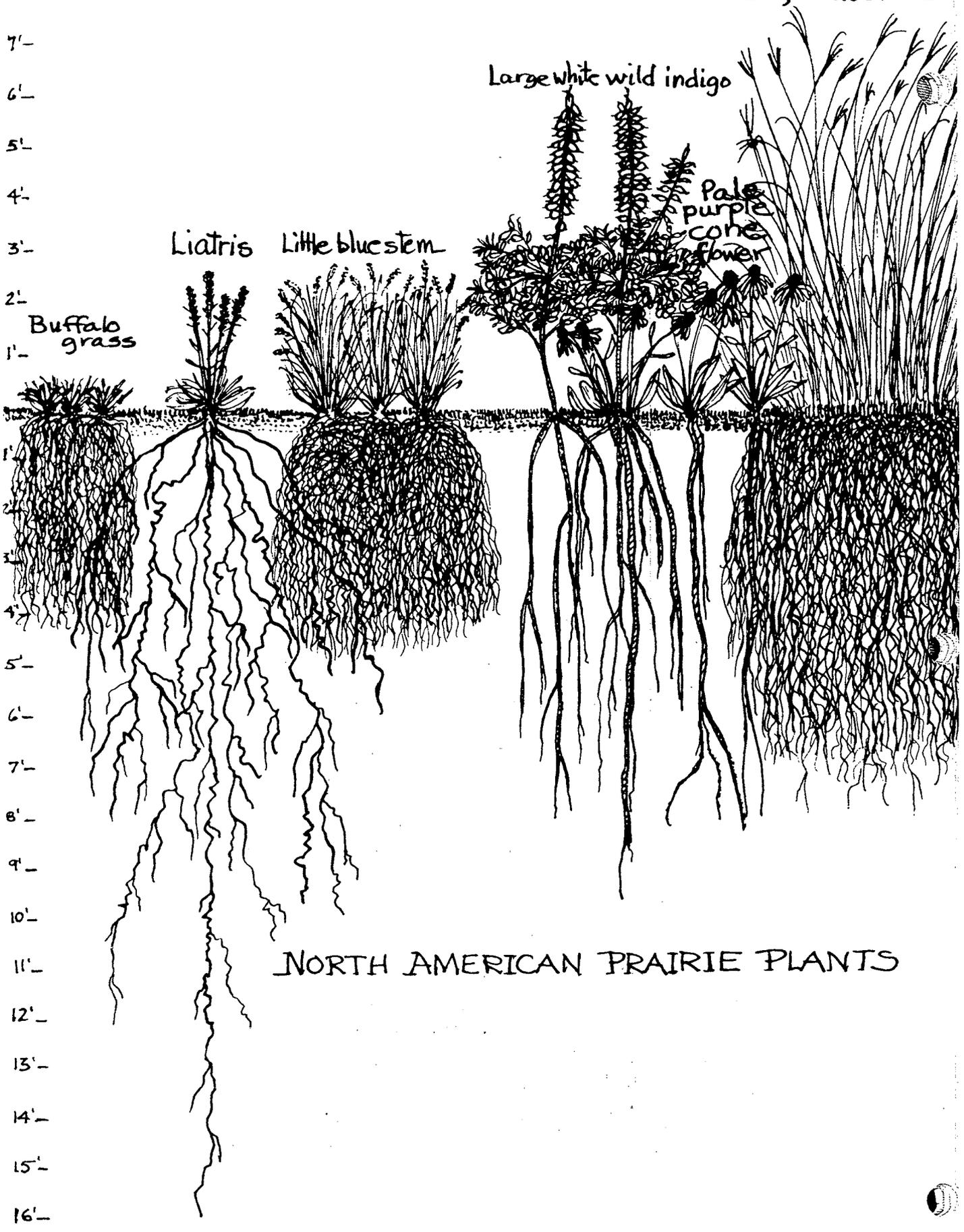
Big bluestem

Large white wild indigo

Liatris Little bluestem

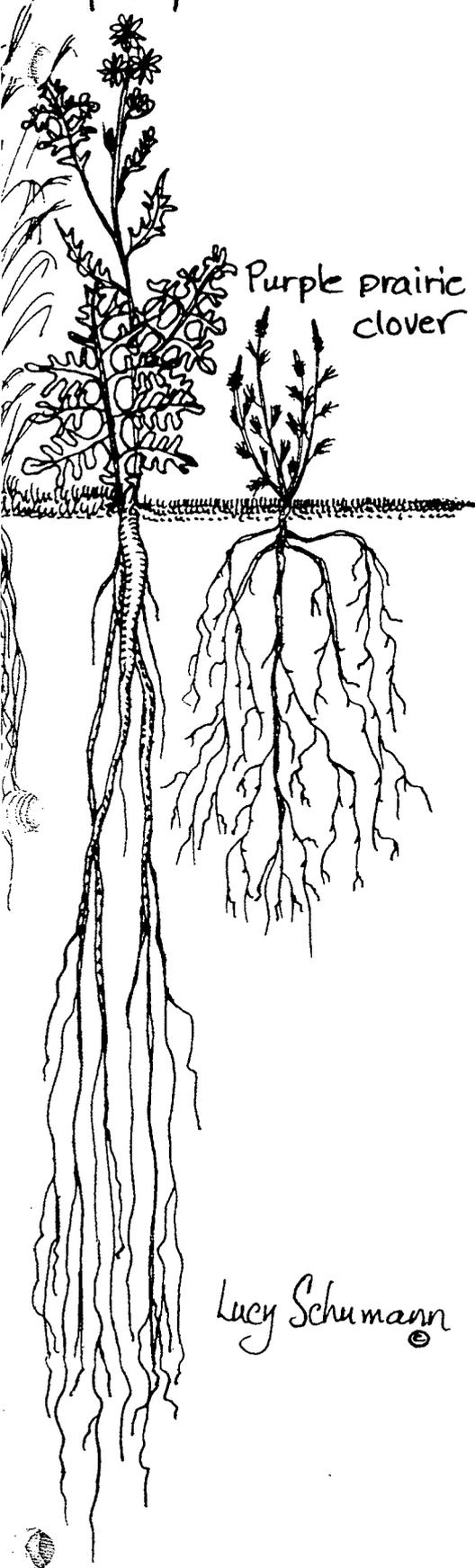
Pale purple cone flower

Buffalo grass



NORTH AMERICAN PRAIRIE PLANTS

Compass plant



Purple prairie clover

Lucy Schumann

Books about prairies . . .

Schlitz Audubon Center Bookstore (414/352-2880) recommends the following titles:

The Prairie Garden: 70 Native Plants You Can Grow in Town or Country by J. Robert Smith (University of Wisconsin Press, \$12.95) Companion plant suggestions are useful. Good info about seed collection, drying, cleaning, storing, and preparation for sowing. Nice black-and-white illustrations as well as color. Good for beginners.

Grasses: An Identification Guide by Lauren Brown (Houghton Mifflin Co., \$10.95) Contains a classic "finder" style into ("If ... then turn to page.") which most people find useful. "One of our most popular grass books."

The Audubon Society Nature Guides: Grasslands by Lauren Brown (\$16.95) Answers what you will find besides plants (birds, reptiles, mammals, insects, etc.) in the prairie. Range extends to California desert grasslands. Gorgeous color illustrations.

Edible Wild Plants of the Prairie and Medicinal Wild Plants of the Prairie by Kelly Kindscher (University of Kansas Press, \$9.95 each) Clear drawings, careful research. Maps of growing areas. Readable. Common names, Indian names, and scientific names given. Very informative.

How to Identify Grasses and Grasslike Plants by H.D. Harrington (Ohio University Press, \$9.95) Well-illustrated with clear descriptions of all the parts of grasses, sedges, and rushes. Includes illustrated glossary. A must for the dedicated amateur botanist. Extensive bibliography.

Grasses of Wisconsin by Norman C. Fassett (University of Wisconsin Press, \$20, hardcover) Some minor errors and omissions, should be updated (published 1951.) Only one available currently on local grasses.

The Prairie World by David Costello (University of Minnesota Press, \$9.95) Emphasis on diverse environments - grasslands, plains, forested river bottoms - and changes over time. Author's own photos. Narration and history.

PrairieErth by William Least Heat-Moon (Houghton Mifflin, \$13.95) Fascinating journey with people and though places of the prairie. On best seller lists.

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Thomas J. Murn
director



(STATE FAIR from page 1)

public about natural landscaping and tie in with our mission statement. When we learned that one million fairgoers are expected this year, we knew we just *had* to help.

Carol Chew called me and together we made several visits to study the DNR parcel of land. In the course of our visits we talked to a park official who showed us maps and drawings related to the history of the grounds and we discovered that the site is a cool, green oasis appreciated by workers and fairgoers alike as a quiet, pleasant retreat and a piece of "real" Wisconsin. Early clippings gave information about Indian mounds which are located next to the "yard".

The "house" in the background of our model "yard" is, in reality, the back wall of the Aldo Leopold Theater which contains of a door and two windows. The prairie and woodland gardens that I began planning after our initial visits divide about equally the 35' x 45' space. For several years plants had been "plugged" into existing vegetation, not unlike the method used in Rae Sweet's yard in Bayside.

Soon we were working with Michele Anderson, DNR Wildlife Assistant at Bong Recreation Area, as overall coordinator. Judy Crane and I begin organizing work crews and telephoning volunteers. Michele ordered woodland and prairie plants and about 15 Wild Ones supplied dozens of

"excess" native plants from their own yards. The next step was to mark both plants the DNR had placed in earlier years and the new ones we were adding.

Our biggest concern has been the large amount of buckthorn which has to be removed roots and all. Margot Fuchs suggested loosening a batch of it with a garden fork and then grasping each main "trunk" with pliers (or needle-nose) close to the ground to pull it out. (*Editor's note: For more on common buckthorn, see "Invasion of the Weeds" by David Tenebaum in The Milwaukee Journal's WISCONSIN Magazine, Sunday, June 6, 1993.*) Champion buckthorn remover has been Ed Janke whose hard work has contributed greatly to the big improvement in the site.

Curt Crane has relocated shrubs and added to the network of woodchip paths. We are borrowing Gloy Jacobson's idea of flagstones set in woodchips for a shaded clearing. The DNR Ice Age Reserve is building two Aldo Leopold benches.

To provide a realistic front-yard look, we are retaining existing non-native foundation plantings, repainting the "front" door, and adding natives to window boxes. Plans for 1994 include a small two-level entry deck with an open pergola-effect frame for native vines.

We have had so much help and cooperation--from the State Fair Police, the DNR, the Waukesha District Department of Transportation, the Washington County Highway Department, to the plumbers working in the adjoining fair buildings. Even when the grounds were recently packed with Harley Davidson riders and security was tight, we were allowed in. Rainy weather has been a challenge for workers, but beneficial to plants. Best of all, is the chance to know other Wild Ones and learn from each other. Trish Sullivan hauled chips from the City of West Allis and gave us every plant she dug on the May Dig Day (which helped greatly in filling in "holes.") Sherry Wank, Joanne Lauer, and Melissa Cook worked tirelessly. More will be coming in the next few weeks as we get closer to the August 5 - 15 fair dates. Judy Crane is making aprons to identify Wild Ones volunteers during the fair. A tri-fold brochure is being developed with the DNR to explain the project to visitors. There is still time to volunteer by calling 414/251-2185. - Barb Glassel

Barb's regular column, "Wildcare" will reappear in our next issue as she finishes working on the project described above.

Volunteers needed for plant network

We need your help enlarging our native plant information network. If you would be able to lend your phone number and set up a few hours answering time, convenient to you (sometime before fall), please let us know. It can help us exchange information about "bulldozer alerts" to rescue native species or enable those who want to trade plants a way to tell others. Some may use the network to let others know they are welcome to come dig out wildflowers growing in pathways, for example. If you can help get this useful service going, call 414/354-8018 for more information.

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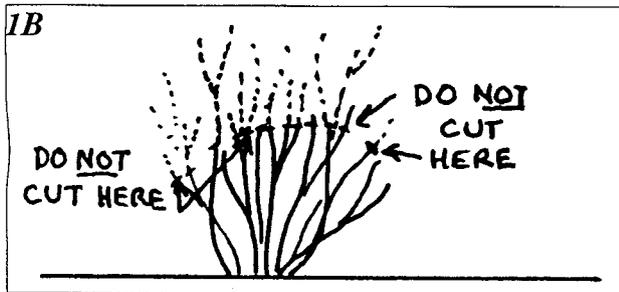
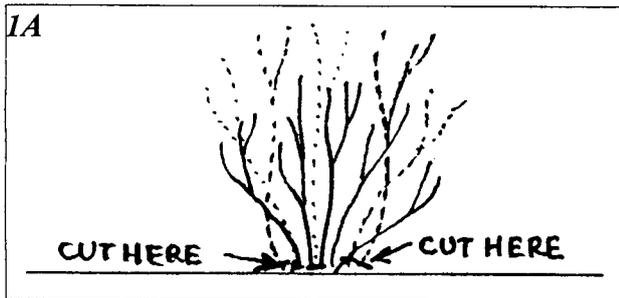
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Learn pruning skills to aid shrub longevity and natural beauty

When done properly, pruning can enhance the beauty of a shrub and extend its life expectancy. Conversely, improper pruning robs a plant of its natural beauty and can drastically shorten the plant's life.

The simplest form to prune, and perhaps the easiest to bring back to its natural form, if properly pruned, is one that consists of relatively straight canes. The red twig dogwood is an excellent example of this type. Follow the illustrations of where to cut (1A) and where not to (1B) below:

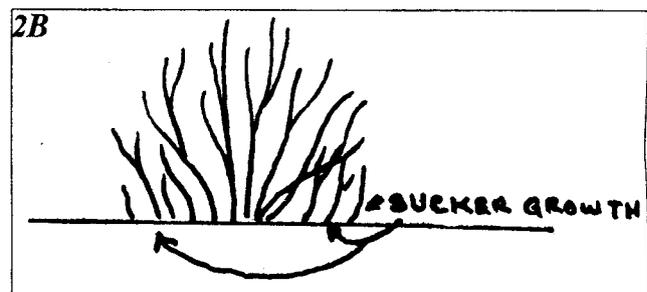
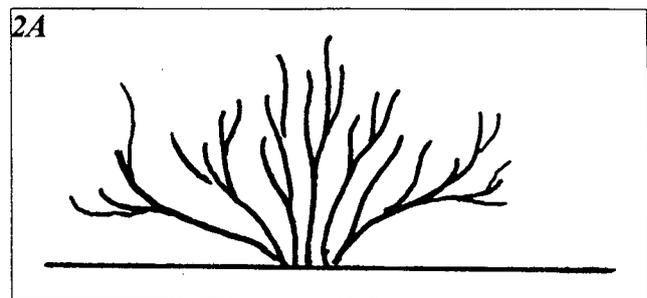


Look for dead, damaged or diseased growth and remove it first. This improves the plant's appearance and removes areas where further disease or insects may lodge. Additionally, in the case of the red twig dogwood, the old canes lose their red color (which is green in summer), and take on a beige and/or brown color as they age. So when pruning this shrub you will also remove discolored canes. It's part of the natural life cycle for the plant to shed old canes in this way. We help the renewal process by pruning old canes out and thus encouraged the growth of new ones.

Remove crossing, rubbing branches or canes to improve appearance and protect the plant from developing a weak spot where insects or disease may move in.

If shrubs are growing where space is limited, as in urban landscapes, we may need to control their height and/or spread. In this case remember again to prune from the base. For height control, prune out the largest canes and for spread, find the base of the invading canes and remove.

Pruning causes new growth, however, top pruning encourages distorted growth. Top pruning the red twig dogwood, for example, will dramatically increase the length of horizontal branching, undoing the natural grace of the plant (2A). It will also increase the density of growth at the tips, limiting light and therefore growth at the center. If the natural form has been destroyed, remove one-third of the most distorted canes the first year and one-third each of the two subsequent years. By the fourth season you will have a new plant.



Pruning at ground level also creates new growth, in this case, it will increase the number of suckers at the base (2B). Follow-up involves removing some of the suckers, leaving only those desired to develop into mature canes.

It is easiest to understand the basic structure by pruning the plant is bare of leaves. Pruning after the hardest part of winter is past is most comfortable for the plant and the pruner. However, if done then, one must be mindful that with many plants (those that bloom on old wood) some of the potential spring bloom is being cut away. Nevertheless, if the general principle of never removing more than one third of the total plant in any one season is respected, ample flowering should occur anyway and the plant's vitality will be maintained.

Remember to look to the structure of the plant for "advice" on how to prune. In subsequent issues we'll discuss how to prune plants with a more complex growth structures. Do reread the pruning article in the March - April 1993 issue for more general pruning advice. - Gloy Jacobson

(PRAIRIE PLANTS from page 7)

On the other end of the growing season in late fall, asters cover the prairie with shades of white, lavender, purple, and blue. Of all the many species found in prairies, the aromatic aster, *Aster oblongifolius*, is one of my favorites. It is very similar to New England aster, *Aster novae-angliae*, with large, many-rayed heads of deep blue violet, surrounding orange disks. Small leaves are covered with coarse hairs which give them a rough feeling and grayish cast. They clasp the stem without petioles. There are many branches on the stem so that it is covered with an abundant display of flowers. Aromatic aster is adapted to a soil that is high in lime so on my flagstone terraces it makes dense, rounded mounds about one and a half to two feet high that are just covered with flowers in September and October. New England aster is taller and prefers wetter soil. Its rays are more red-violet or even pink.

In mid-summer the showiest prairie flower is probably the butterfly weed, *Asclepias tuberosa*. Unlike other milkweeds, it does not have a milky sap and its flowers are brilliant orange. It truly does attract a lot of butterflies and other insects. It stands about three feet tall and its cluster of stems produce an abundance of flowers, often continuing to expand and bloom for several weeks. It usually sets a lot of seed which can be gathered and planted as soon as the pods open. It is easy to grow from seed and prefers a well-drained, sandy soil but can do well in heavier clay soil.

Another name for butterfly weed is pleurisy root because of its medicinal properties. Several Native American tribes used them in elaborate ceremonies in which they dug, prepared, consecrated and distributed the root which was used to cure lung ailments, open wounds, and as a purgative. Recent tests have found anti-leukemia properties in many milkweeds.

Although prairie plants begin to bloom in April and continue through November, the best time to see them is in mid-

summer. It is estimated that about 15 new species come into bloom every week and about 50 or 60 will be in bloom on any given day during the height of the growing season. June and July have the brightest colors and greatest variety of forbs in bloom. August and September brings warm season grasses into their glory.

Yes, come walk in the prairie in summer to see plants well adapted to heat and drought. Listen to wind swish through big bluestem and Indian grass six to ten feet above parched, sun-cracked soil. Feel cool elephant-ear prairie dock leaves, or compass plant pointing always toward the sun. See the blaze of colorful flowers contrasting against many shades of green. Smell the pungency of mint and coneflower, the intoxicating sweetness of rose and dropseed. Experience the American landscape as it was when Indians and first settlers saw it. Probe deep into prairie soil and learn to thrive in adversity as prairie plants do. - Pat Armstrong

Pat is co-leader of the Northern Illinois Wild Ones Chapter. Her landscaping has been featured in *Midwest Gardens* by Pam Wolfe.



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How Wild can YOU get?

Now's the time to plan a prairie garden.

- Pick a spot in the sun.
- Plan the shape of your garden. (Ours is sun-shaped)
- Check out your dirt. Is it hard clay? Sandy? Dark and crumbly?
- Pick out plants that will do well in your soil.
- This fall, dig all vegetation out of your garden and loosen the soil.
- This fall or next spring, plant prairie grass and flowers from a friend's gardens or from a company that grows them for sale. Never take plants from a wild area—so few of these areas are left, we must protect them.

Suggested plants for your soil



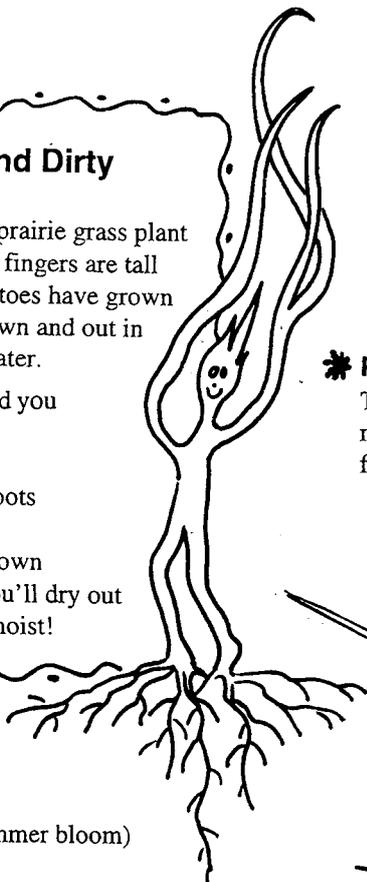
The Wild Ones— The Next Generation



Hi! We're Wild Ginger and Joe Pye-Weed. We were born to be wild—we're named after American wildflowers. Join us this month in a Prairie Adventure!

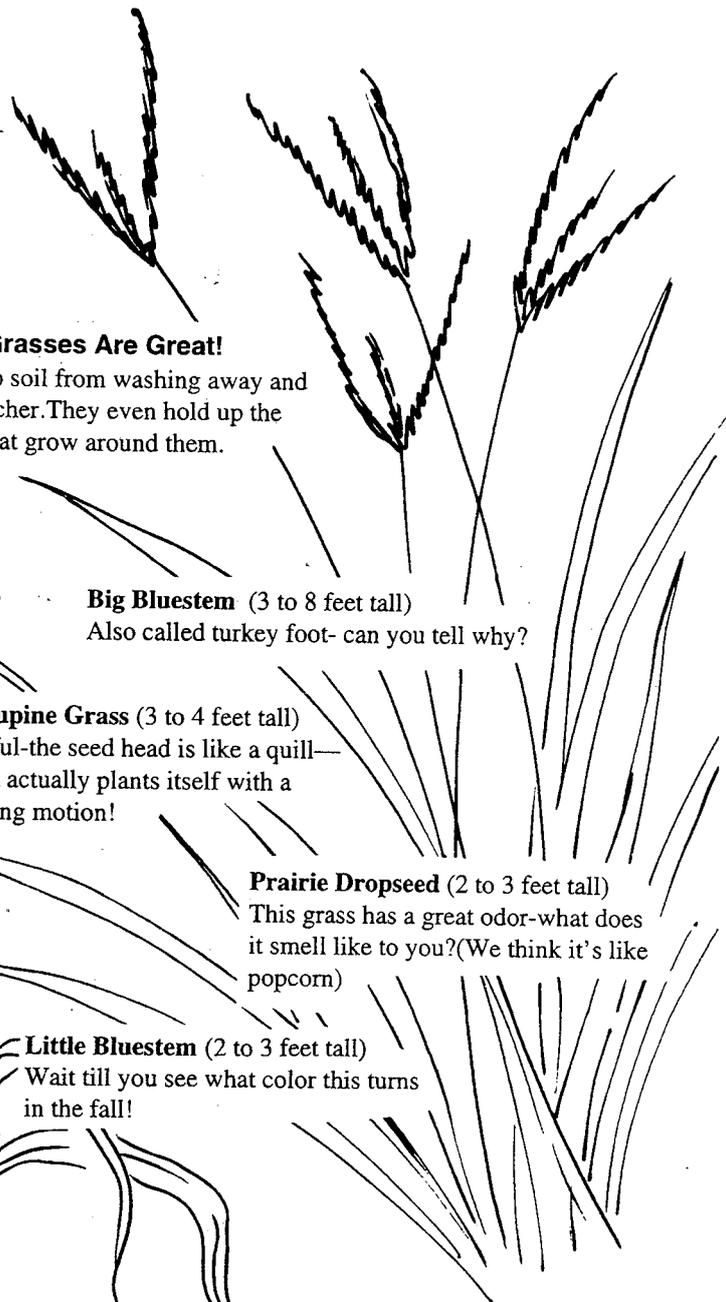
Getting Down and Dirty

- Imagine you are a tall prairie grass plant
- Pretend your arms and fingers are tall graceful leaves. Your toes have grown roots that can reach down and out in dirt to find food and water.
- What kind of dirt would you like to be planted in?
- Not rock hard – your roots can't get through
- Not too wet – you'll drown
- No big air pockets – you'll dry out
- Just right – loose and moist!



* Prairie Grasses Are Great!

They keep soil from washing away and make it richer. They even hold up the flowers that grow around them.



Big Bluestem (3 to 8 feet tall)
Also called turkey foot- can you tell why?

Porcupine Grass (3 to 4 feet tall)
Careful-the seed head is like a quill—and it actually plants itself with a twisting motion!

Prairie Dropseed (2 to 3 feet tall)
This grass has a great odor-what does it smell like to you?(We think it's like popcorn)

Little Bluestem (2 to 3 feet tall)
Wait till you see what color this turns in the fall!

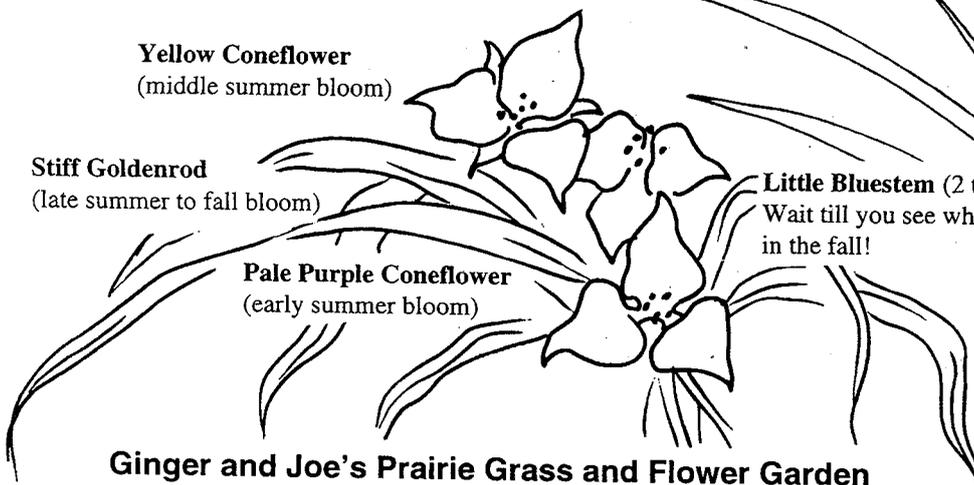
* The Flowers

Spiderwort
(late spring to early summer bloom)

Yellow Coneflower
(middle summer bloom)

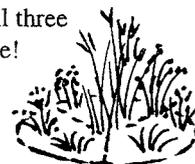
Stiff Goldenrod
(late summer to fall bloom)

Pale Purple Coneflower
(early summer bloom)



Ginger and Joe's Prairie Grass and Flower Garden

Different prairie plants like different kinds of soil. We wanted several grasses so we added sand to one third of our bed, and dark crumbly dirt to one third, and left one third as clay. These wildflowers grow well in all three kinds of soil. Big Bluestem grass is happy in almost any kind of soil, too — so it goes right in the middle!



Committee needs help creating data base

A joint committee comprised of members of Wild Ones and Milwaukee Audubon is collecting data on environmental activities and resources throughout the state.

Both organizations are dedicated to educating the public about environmentally sensitive land stewardship and land restoration with native plants.

Information gathered will be used as a basis for educational outreach programs and action initiatives. The group's goal is to help community decision makers as they move toward ethical choices in land use and in the redefinition of current ordinances. Also the group plans to serve as a resource for schools, commercial property owners, and individuals who are choosing

natural conservation areas on their own property. By learning to give up large areas of non-functional, high maintenance lawns for naturalized areas we believe we will not only gain a colorful, seasonally changing landscape but will give protection to nature's vast biodiversity.

For more information about the committee's work and for a survey for your community, contact Rochelle Whiteman (414/351-2291) or Mark Feider (414/228-7425).

Board supports Great Lakes Water Quality Initiative

At its June 10 meeting, the Milwaukee Wild Ones Board unanimously endorsed the Great Lakes Water Quality Initiative, a standardized set of pollution rules proposed for the region by the EPA. If adopted, it is estimated that the dumping of toxics into the Great Lakes will be reduced by about 80 percent. In addition, the GLI will plug dilution loopholes, shift the burden of proof regarding a pollutant's safety to the polluter, and give special protection to Lake Superior because it has the highest water quality of all the lakes. Public hearings will be held at various locations this summer (call 1-800-621-8431 for hearing information), and written comments should be sent to: Wendy Schumacher, Water Quality Branch, U.S. Environmental Protection Agency, 77 West Jackson Blvd., Chicago, IL 60604 by September 1.

Milwaukee Wild Ones dig for spring plants and share tips

It was a cool, sunny morning on May 8 when the Wild Ones met for our annual "Dozer Alert" meeting. We had four locations from which to rescue plants this year. Sites were filled with woodland plants such as trillium, round-lobed hepatica, wood columbine, violets, potentilla, Canada mayflower, Solomon's seal, wild strawberries, May-apple, baneberry, bloodroot, wood anemone and sappling ironwood. Monarda, Culver's root, rose and sedge were there for the observant.

We visited three homes on Help Me Day, June 12. At Jenny Chiaverina's we saw Neil Diboll's clay-buster mix seedling popping up. Seeds of compass plant, black-eyed Susan, grass-leaf aster, New England aster and coneflowers cast last July were apparent. Buckthorn and quack grass were problems.

My home was next and I showed my biggest problem: snow-on-the-mountain planted four years ago. Grass mulch laid heavily on one clump and we discovered it had killed the plants beneath. Our pond/wetland area is our next project.

Kerry Thomas showed us her front yard, mulched last year. She has planted woodland and prairie species such as Virginia waterleaf, bloodroot, wild geranium, ferns, turtlehead, bluestem grasses, liatris, phlox, purple coneflowers, and New England aster. Viburnum, red-twig dogwood, choke cherry, and sumac are planted under large trees and will be very wonderful as they become established. - Jan Koel

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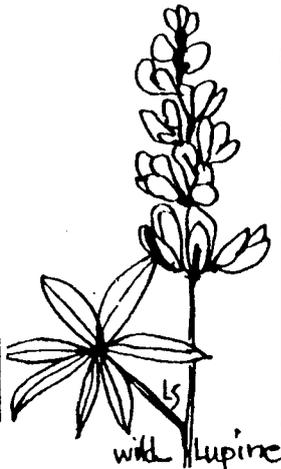
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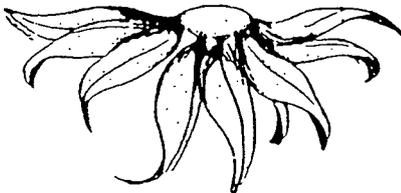
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Wild Ones - Natural Landscapers, Ltd. is a non-profit organization with a mission to educate and share information with members and community at the "plants-roots" level and to promote bio-diversity and environmentally sound practices. We are a diverse membership interested in natural landscaping using native species in developing plant communities.

The Outside Story is published bimonthly by Wild Ones - Natural Landscapers, Ltd.® Material for newsletters is welcomed and should be submitted eight weeks prior to publication to: Carol Chew, 8920 North Lake Drive, Bayside, WI 53217. Send change of address to: Jean Palm, 625 Orchard Street, West Bend, WI 53095. Advertising Managers: Melissa Cook, 6838 North Range Line Road, Glendale, WI 53209 and Judy Crane, N97 W16981 Cheyenne Court, Germantown, WI 53022. Distribution Coordinator: Delene Hansen. Artwork: Lucy Schumann.

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Letters . . .

Dear Editor: Help! I'm a new member of Wild Ones. I would like to start a native garden/prairie on about one-fourth acre of glaciated soil.

If you folks have any left-over grass and forb seeds, I can use all I can get.

When is the best time to plant seeds in a dry and mesic land - spring or fall?

Thank you for your help. - Arlyne Acasio, N5501 Kathryn Drive, Plymouth, WI 530073 (414/893-0642)

Dear Editor: Here are some clarifications regarding my talk, "The Joys of Creating and Living with a Natural Landscape in an Urban Environment", which was reported in the last issue.

In landscape described there is, fortunately, a good deal of existing topsoil, so the transformation from a traditional landscape to a natural woodland proceeded with the following steps:

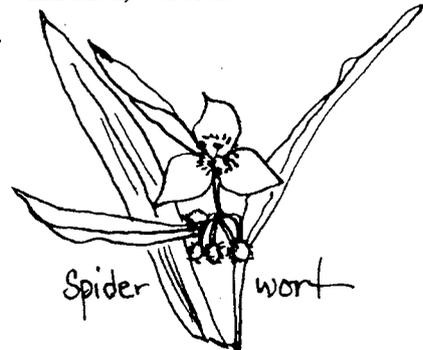
- 1) A plan was done using native plant communities.
- 2) Trees and shrubs were planted removing a generous ring of sod first.
- 3) The entire property was newspapered and mulched. Overlapping sections of paper were laid down 10 to 20 sheets thick and three to four inches of wood chips were laid on the papers.
- 4) No additional planting was done for two years. It can take that long for grass under newspapers to completely die off.
- 5) After the two year

period, establishment of the herbaceous ground layer was begun.

Additional tips include allowing each tree and shrub enough space to attain its natural height and width. Re-edging annually wherever grass meets a mulched area. Weed! Weed! Weed! Keep after weeds from the beginning to avoid major problems. As the ground layer fills in, weeding will be minimal.

The transformation of this landscape and maturation have truly been a joy. Each day it's a thrill to see what's new! -Gloy Jacobson (*Editor's note: See Gloy's article on pruning in this issue.*)

Dear Editor: We planted a wildflower meadow on a hillside. It bloomed spectacularly the first year with tons of black-eyed Susans. Every October it is mowed by the landscape architect who planted it. Our problem is that this year there are patches of quack grass and yarrow. How do we get rid of these? Roundup? Digging? We'd appreciate any suggestions. -Kathy Geldermann, Hartland, Wisconsin



1993 Wild Ones Membership Dues

Name _____

Address _____

Phone _____ Chapter _____

Dues are \$15 (includes meetings, plant digs, seed-gathering, and six newsletters.) Please make checks payable to: Wild Ones. Mail checks to: Jean Palm, 625 Orchard Street, West Bend, WI 53095.

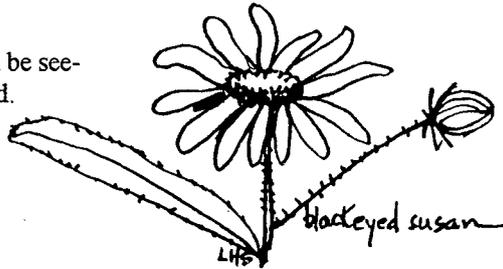
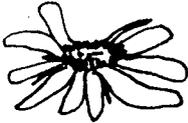
Calendar

Schlitz Audubon Center and Wehr Nature Center Chapters: (Note that the same program is given at Schlitz Audubon Center, 1111 East Brown Deer Road, Milwaukee, WI 53217 at 9:30 a.m. and Wehr Nature Center, 9701 West College Avenue, Franklin, WI 53132 at 1:30 p.m.)

Saturday, July 10: Join us for a tour of prairie (or wetland?) yards. You'll gain lots of ideas!

Saturday, August 14: Visit the yard of gentian expert, Babette Kis.

Saturday, September 11: We'll be seeing Noor Morey's Mequon yard.



Green Bay Chapter:

Wednesday, July 14 at 7 p.m. We'll spend an evening at the University of Wisconsin - Green Bay Prairie. Gary Fewless is our tour leader.

Wednesday, August 11 at 7 p.m. We'll visit members prairie gardens to share ideas and help.

Saturday, September 25 at 9 a.m. Our annual seed collecting day.

Call Marylou Kramer (414/826-7520) for information about any events.

Northern Illinois Chapter:

Saturday, July 10 from 10 a.m. - noon. Tour Vicki and Ron Nowiki's *New American Yard* for alternative ideas. Call Vicki (708/852-5263) to register.

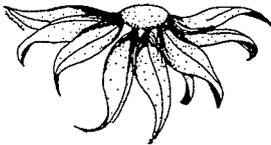
Saturday, July 17 from 10 a.m. - noon. After seeing her program, we'll visit Perle Olsson's yard. Call her to register and for directions (815/653-6936).

Saturday, August 7 - all day. Lorrie Otto will tour us through Milwaukee's famous natural yards. Call Vicki or Pat.

Sunday, August 15 at 2 p.m. We'll see an award-winning butterfly garden in Oak Park. Call Vicki (708/852-5263) to register and get directions.

Sunday, September 12 at 2 p.m. Jan Smith will show off her fall garden complete with vegetables and flowers galore. Call 708/653-3958 to register.

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