

RAVINES
THEN & NOW
TREASURED LANDSCAPE

Cover to have new style house in a dreamy print, surrounded with native landscaping.
Road leading to house has a bridge over the ravine.

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On Improving the Property
by May T. Watts

They laid the trilliums low,
and where drifted anemones and wild sweet phlox
were wont to follow April's hepaticas - they planted grass.

There was a corner that held a tangled copse
of hawthorne and young wild crabs,
bridal in May above yellow violets,
purple-twigged in November.
They needed that place for Lombardy poplars - and grass.

Last June the elderberry was fragrant here,
and in October the viburnum poured its wine
beneath the moon-yellow wisps of the witch-hazel blossoms.
They piled them in the alley and made a burnt offering - to grass.

There was a slope that a wild grapevine had captured long ago.
As its brink a colony of mandrakes held green umbrellas close,
like a crowd along the path of a parade.
This job almost baffled them; showers washed off the seed
and made gullies in the naked clay.
They gritted their teeth - and planted grass.

At the base of the slope there was a hollow
so lush with hundreds of years of fallen leaves
that maiden-hair swirled above the trout-lilies,
and even a few blood-roots lifted frosty blossoms there.
Clay from the ravaged slope washed down
and filled the hollow with a yellow hump.
They noticed the hump - and planted grass.

There was a linden that the bees loved.
A smug catalpa has taken its place,
but the wood ashes were used to fertilize the grass.

People pass by and say: "Just look at the grass -
not a weed in it. It's like velvet!"
(One could say as much for any other grave.)

Short paragraph about May T. Watts and location of work. Words over image; picture of heritage garden with native plants.

Key Concept Statement:

Living with Highland Park's legacy of native landscaping yesterday and today.

In this booklet we explore the rare, unusual beauty and heritage of Highland Park's most treasured landscape. Our goal is to inform and inspire you to protect and preserve this natural treasure in our own backyards.

The geology, ecology, and human history of the ravine-bluff ecosystem is both fascinating and complex. After a brief overview of the formation and ecology of our ravines, we will focus our attention on the rich ecology and early conservation efforts of Jens Jensen, May T. Watts, and Jesse Lowe Smith. How have the legacies of these past voices for the preservation of the ravines effected how we ravines today? We will examine the ongoing preservation and environmental issues in restoring the landscape of the Highland Park ravines.

The ravine bluff ecosystem is unique to the North Shore communities of Lake Michigan north of Chicago. The deep depressions they form is a defining character of the landscapes of these communities. It is indeed this change in topography that has made this area such an attractive and desirable place to live. The ravines begin about two miles south of Lake-Cook Road and extends north to North Moraine, a long linear hill of glacial deposits left from the last ice age approximately 10,000 years ago. The formation of the ravines is the result of thousands of years of water running over the surface of the moraine, eroding the landscape, carving ever deeper the system of ravines. This natural erosion process continues today, sped up by the additional storm water runoff from streets, parking lots, driveways, and rooftops. Water, in its frozen form, created the moraine; water, now in liquid form, is eroding it away. We can in some instances control this erosion process but it can not be stopped.

GEOLOGICAL UNIQUENESS

Why ravines are unique and why they deserve saving.
(Waiting for research to be completed.)

IMAGERY

Photos and sketches.

Endangered and showy species with quotes and folklore.

Jesse Lowe Smith.

HERITAGE OF PRESERVATION

Native Landscaping Heritage

Jens Jensen

May T. Watts

Jesse Lowe Smith

(Waiting for research to be completed.)

Introduce ideas of and on native landscaping today.

WHATS

To know this ravine and bluff ecosystem in Highland Park we need to realize that there are ten ravines here. There are bluffs that exceed 90 feet and extend more than a mile inland from the sandy shores of Lake Michigan. Our ravines are interconnected. They share the same soils, cold lake winds, and wet, humid micro-climate. These qualities define the system.

Today there are over 780 properties that border our ravines. Of the total ravine system over 80 percent are in private ownership. The problems of coexisting with this specialized ecosystem are varied and require constant surveillance.

Living on a ravine is a joy.

With all the pressures that are exerted on the system today, the system cannot continue to function in a stable manner. The residents of Highland Park have always been concerned with the health of this enchanting system. Over the years there have been different approaches taken to 'help or fix' these systems. Many theories and ideas have made their way to the blackboards. Some suggestions have been to pave entire ravines, use the system as a landfill, create deep tunnels under the bottom of the ravines, and the list goes on. As we come to understand more about the ravines and how specialized and interconnected they are, the more aware we are of ways to sustain the system.

THREATS TO THE RAVINES

Because the ravines are an interconnected fragile system the threats are many and real. In geological time they are a young system. The ravines were formed as a natural drainage system. Because water always runs downhill, in the past 100 years erosion has claimed 50 to 100 feet of lakefront property. That property is now laying at the bottom of Lake Michigan. In recent years the construction of impervious (paved) surfaces contributed to erosion. These hard surfaces cover the soil and prevent natural water absorption. The waters come from storms, homes, streets, and schoolyards. As the water runs off these surfaces it moves with greater quantity and speed, downhill, into the ravines. As the water rushes down the slopes it sweeps everything in its path. On the water's journey it carves out gullies in the ravines' walls. These gullies weaken the walls of the ravines and saturate the soil. Heavy, waterlogged soils cave in the walls of a ravine causing slumps. If the main water course becomes blocked, waters from the top the of the ravine back up. A larger water path is formed, undercutting the waterway banks and causing more slumps. The process continues.

Dumping of waste is another problem on the ravines, mainly discarded lawn debris of local residents. As the fragile soils of the slopes are covered with lawn debris, they become saturated. The native plants and seeds can not reach the precious sunlight, allowing weeds to invade the area. Saturated soils continue the erosion process.

Human encroachment is a real threat. As the large properties are divided and built upon, the pressure builds. Additions are added to existing homes and hang over the ravines. Decks are built to enjoy the ravine home, but the shade crowds out the native plants. The use of lawn fertilizers adds too many nutrients to the soil. Add a lawn sprinkler system and the recipe reaches the ravine system faster.

COMPARE AND CONTRAST HEALTHY VS. UNHEALTHY SYSTEM

Ravines are living, operating systems that are designed to stand or absorb the movement of water. Problems begin when the speed and velocity of water is beyond system tolerance... Ravine Overload! Healthy ravine systems contain diverse populations of plants and animals. Ravines that have slopes of 35 degrees or more are relatively stable.

Vegetation plays a large role in slowing down the erosion process. The roots of plants hold the soil in place, and slow the speed of water as it travels down the slope. Restoration of native plant species that have adapted to the ravine micro-climate provide easy landscaping care and picturesque beauty.

Since our ravines are a specialized system we need to step back and look at the big picture before we set out to fix the problem. When you look at the ravine picture it through all four seasons. Think wet springs, cold winters, remember stress that has occurred. Signs of an unhealthy ravine are loss of large canopy trees, exposed root systems, bare spots that expand, soil slippage towards the bottom of the ravine, and large populations of invading species that are not native. These are signals that we are losing the ravine.

As our knowledge of the system grows our understanding deepens. There are helpful measures we can take to rebuild our ravines.

WAYS

What can a private owner do?

Preventative measures and maintenance

Because 80 percent of our ravines are in private ownership our mission becomes clear. We must act with preventative measures and continue maintenance to save this precious treasure. The ravines have been studied because of their rarity, and these studies have brought innovative measures that can be used on private properties.

Replanting and restoration efforts to plant native species can improve and maintain soil quality, and give us the spring wildflowers that we can only read about now. To aid in erosion reduction, water from all household (gutters, pools, etc.) and pavement runoff should be channeled to storm water systems in the streets. Slowly and safely, the water will travel to the bottom of the ravine.

Residents have also installed 'elephant hoses'. These above ground hoses allow the water to move down slope, saving the soil from erosion. Storm water runoff is a large threat to the slopes as quantities of water arrive and enter the ravine in a short amount of time. This is a large problem that has been dealt with by the City of Highland Park for many years.

Through creative construction and solid engineering practices the homeowner can contribute to the preservation of our unique ravine ecosystem.

PARK DISTRICT AND CITY OF HIGHLAND PARK

The Park District of Highland Park recognizes our ravine system as a true treasure, and have become active in their preservation. The Park District owns five properties that are in the ravine system: Port Clinton, Moraine, Park Avenue, Millard, and Rosewood. The Park District has received grants that have helped to finance restoration of native species. Publications, erosion control, and ravine maintenance have been used to establish public awareness of the beauty of this system. Education classes and workshops are offered seasonally by a naturalist staff.

The City of Highland Park has historically been concerned with the ravines and their preservation. The ravines are one of the many reasons Highland Park is considered desirable. The City has passed ordinances affecting set-back construction, dumping of lawn debris, steep slopes, and erosion control. In addition, there is a professional staff trained in ravine care.

The Park District and the City of Highland Park have often worked together. In 1970 a Lakefront Task Force was established that has community members and staff from each agency represented. This Task Force is quite active in ravine issues with community involvement, publications, and educational opportunities.

CONCLUSION

Back to the beginning
Tell them what you told them
Remind of key points
Beauty
Inspire inspiration

The first real estate ads proclaimed "Trees and ravines are the main features, with commanding lake vistas." Now as large estates are subdivided and houses are built and turned over to the next generation, the heritage of native landscaping is fading. The extensive use of native landscaping helped preserve the character of east Highland Park for many generations, even though most of the land was in private ownership. New residents have not been exposed to the rich tradition of preserving the ravine-bluff ecosystem that hugs the Lake Michigan shoreline. We have to build sense of place. Reestablishing the restoration and preservation of native landscaping on private property will benefit the unique wildlife of this fragile ecosystem and enrich the lives of the human residents.

In this booklet we have tried to increase the awareness of the history of the ravine system. Geological history is helpful in understanding how the ravines developed here. Historically, resident involvement in the preservation of native landscaping has been beneficial.

If you explore the east Highland Park area there are signs of our native landscaping heritage all around us. In spring you will notice trilliums at the base of ancient oaks, using their trunks as a shelter from the cool lake breezes. Look for trout lilies, wood anemones, and bloodroots to name just a few. As the canopy layers leaf out, summer arrives. The ravines become humid and shady. The quiet whispers of birds begin the day. In fall the colors explode as winter creeps down the slopes, creating contrasts.

The cycle continues.

We encourage you to follow the generations before who, with their forethought, have given the ravines of today into your hands. Accept this stewardship with thoughts of the future.

REFERENCES

1. Lake Michigan Ravines on Chicago's North Shore, Robin C, Moran
2. Vascular Vegetation of Lake County, Illinois with Special Reference to its Use in Wetland Mitigation, Gerould Wilhelm, February 1991
3. Illinois Shoreline Erosion Final Interim IV, Draft Feasibility Report, November 1996, Beach Nourishment Task Force
4. Ravine System is Deteriorating! Sheryl DeVore, Pioneer Press, September 23, 1993
5. Plant Species Inventory of Highland Park, Rick Gabriel, Park District of Highland Park, June 20, 1995
6. Vascular Flora of the Ravines Along Lake Michigan in Lake County, Illinois, The Michigan Botanist 19(4):123-140
7. Wildflowers of the North Shore, sketches by Derek Norman
8. Ravine - Her Charms and Destiny, Published by Ravinia Garden Club, written and illustrated by May T. Watts, assisted by Hazel Crow Ewell, Historical Reprint April 1980 by Park District of Highland Park and Highland Park Historical Society
9. Preservation and Management of Ravine Vegetation, Illinois Natural History Survey, City of Highland Park.
10. Highland Park's A.G. Becker Estate by Susan S. Benjamin, Illinois Historic Preservation Services, Vol 9 No. 6 April 1987
11. Landscape Artist in America, The Life and Work of Jens Jensen by Leonard K. Eaton, The University of Chicago Press 1964
12. Pioneer to Commuter, The Story of Highland Park by Marvin Wittele, The Rotary Club of Highland Park Reprint copyright 1958
13. Physical Geography of the Evanston Waukegan Region by Wallace W. Atwood and James Walter Goldthwait Department of Registration and Education, Division of State Geological Survey Bulletin No 7 Urbana, Illinois 1908 Reprint 1925
14. Urges Bridges Over Ravines, Opposes Fills by Jens Jensen Letter to the Editor in the Highland Park Press April 9 1925
15. Siftings by Jens Jensen, Reprint 1956 R.F. Seymour Publishing, Chicago Illinois
16. Living in a Ravine and Lakefront Community prepared by the City of Highland Park's Lakefront Task Force and the Department of Community Development, 1701 St. Johns Avenue, Highland Park, Illinois 60035
17. Planting in Ravines, prepared by the City of Highland Park's Lakefront Taskforce and the Department of Community Development, 1707 St. Johns Avenue, Highland Park, Illinois, 60035.
18. Designers of Our State Park and Forest Preserve Systems by Jane and Dean Sheaffer, Article in Illinois Parks and Recreation, September/October 1993
19. Vegetation and Vegetative Stabilization for Bluffs and Ravines by Mark T. Bolton District Conservationist, USDA Soil Conservation Service July 1984
20. New Tax Eyed for Ravine Preservation by Barbara Bell Pioneer Press March 7 1996
21. Natural Resources Plan Booklet by Lake County Planning, Zoning and Environmental Quality, Lake County Board 1980

22. Steep Slope Ordinance 1985, City of Highland Park Code, Section 155
23. Landscape Debris Ordinance, City of Highland Park, Section 131.040
24. Resolution of City Policy on Participation in Erosion Control in Ravines October 1979
25. City of Highland Park Erosion Study February 1977