



# November and December Meteor Showers

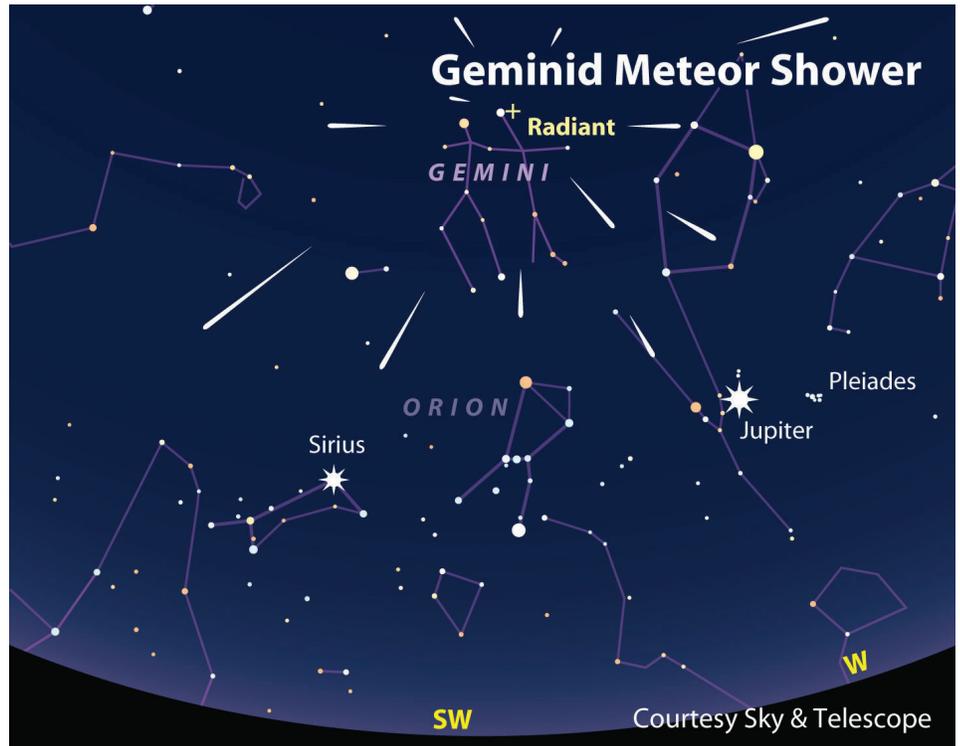
## The Leonids Peak Viewing: November 17 & 18, before dawn

This year, the new moon allows a dark sky for viewing the Leonids meteor shower. The peak will be the night of Friday, November 17, and early morning of the 18th.

Leonids are famous for producing some of the most spectacular meteor showers in history, sometimes as high as 50,000 per hour although that intensity is rare. This year the hourly rate will be more like 10 to 20 meteors each hour. The meteor shower is a trail of dust rubble from the Comet Tempel-Tuttle, visible when Earth crosses its orbit.

## The Geminids Peak viewing: December 13 & 14

Look in the northeastern sky for the constellation Orion; the Geminids meteor shower radiates from the constellation Gemini up and to the right of Orion. Unlike many meteor showers are the trails left by comets; however, the Geminids are from the asteroid 3200 Phaethon, which may have collided with



another near-earth object in the distant past, creating a meteor shower of particles.

For the best viewing experience, find a rural location away from light pollution, and be sure to dress warmly. Check out the weather, and find out when the moon will rise and set so you can view when moonlight does not obscure the display of shooting stars.

## *If You Sit Still Long Enough*



If you sit still long enough,  
The cardinals will come close  
and dare,  
To show you the colors that  
they wear,  
If you sit still long enough.

If you sit still long enough,  
The thrasher no longer hides,  
To his curiosity he must abide,  
If you sit still long enough.

If you sit still long enough,  
From the ground the voles will peek,  
And smuggle seeds by your feet,  
If you sit still long enough.

If you sit still long enough,  
The fox will quietly slink by,  
Followed by the white throat's  
tattletale cries,  
If you sit still long enough.

If you sit still long enough,  
So many worries that belong to man,  
Will seem so tiny in your hand,  
If you sit still long enough.

If you sit still long enough,  
The wind becomes a choir,  
And the oaks are temple spires,  
If you sit still long enough.

If you sit still long enough,  
What was once the earth and you,  
Is now one where there were two,  
If you sit still long enough.

- Nighthawk





For me, trees have always been the most penetrating preachers. I revere them when they live in tribes and families, in forests and groves. And even more I revere them when they stand alone. They are like lonely persons. Not like hermits who have stolen away out of some weakness, but like great, solitary men, like Beethoven and Nietzsche. In their highest boughs the world rustles, their roots rest in infinity; but they do not lose themselves there, they struggle with all the force of their lives for one thing only; to fulfill themselves according to their own laws, to build up their own form, to represent themselves. Nothing is holier; nothing is more exemplary than a beautiful, strong tree. When a tree is cut down and reveals its naked death-wound to the sun, one can read its whole history in the luminous, inscribed disk of its trunk; in the rings of its years, its scars, all the struggle, all the suffering, all the sickness, all the happiness and prosperity stand truly written, the narrow years and the luxurious years, the attacks withstood, the storms endured. And every young farm boy knows that the hardest and noblest wood has the narrowest rings, that high on the mountains in continuing danger the most indestructible, the strongest, the ideal trees grow.

Trees are sanctuaries. Whoever knows how to speak to them, whoever knows how to listen to them, can learn

the truth. They do not preach learning and precepts, they preach, undeterred by particulars, the ancient law of life.

A tree says: a kernel is hidden in me, a spark, a thought; I am life from eternal life. The attempt and the risk that the eternal mother took with me is unique, unique the form and veins of my skin, unique the smallest play of leaves in my branches and the smallest scar on my bark. I was made to form and reveal the eternal in my smallest special detail.

A tree says: My strength is trust. I know nothing about my fathers; I know nothing about the thousand children that every year spring out of me. I live out the secret of my seed to the very end, and I care for nothing else. I trust that God is in me. I trust that my labor is holy. Out of this trust I live.

When we are stricken and cannot bear our lives any longer, then a tree has something to say to us: Be still! Look at me! Life is not easy, life is not difficult. Those are childish thoughts. Let God speak within you, and your thoughts will grow silent. You are anxious because your path leads away from mother and home. But every step and every day lead you back again to the mother. Home is neither here nor there. Home is within you, or home is nowhere at all.

A longing to wander tears my heart when I hear trees rustling in the wind at evening. If one listens to them silently for a long time, this longing reveals its kernel, its meaning. It is not so much a matter of escaping from one's suffering, though it may seem to be so. It is a longing for home, for a memory of the mother, for new metaphors for life. It leads home. Every path leads homeward, every step is birth, every step is death, every grave is mother.

So the tree rustles in the evening, when we stand uneasy before our own childish thoughts. Trees have long thoughts, long breathing and restful, just as they have longer lives than ours. They are wiser than we are, as long as we do not listen to them. But when we have learned how to listen to trees, then the brevity and the quickness and the childlike hastiness of our thoughts achieve an incomparable joy. Whoever has learned how to listen to trees no longer wants to be a tree. He wants to be nothing except what he is. That is home. That is happiness.

— by *Herman Hesse*



## On Trail At The Forest Preserve

Check out our website for dates for our 2018 program schedule

[www.krvfpd.org](http://www.krvfpd.org)

## Black Gold for Native Plants in Your Urban Forest

Although humans are certainly capable of inflicting damage on the landscape, there is also the potential to heal a degraded landscape much quicker than Nature on its own. This applies to the urban landscape as well. Typically when a house is built, the topsoil is scraped away down to the subsoil. When the building is completed, sod is brought in to provide a lawn to the yard. Most often, years of fertilizer and pesticide applications have further altered the soil. As a result, the soil constituents, including the living microorganisms in the soil are far degraded from the native soil.

In Midwestern prairie soils, the native soil contained a greater weight of biomass in the soil underfoot than roamed on top of the soil, including large herbivores such as buffalo, deer and elk. A healthy plant and animal community depends on a healthy community of soil microorganisms, much like humans depend on a healthy and diverse microbiota.

Restoring soil to a healthy condition supporting a vigorous plant community initially asks for some intensive effort, but offers the promise of vigorous, healthy plants with a simpler, less invasive nurturing of the soil. Avoiding herbicides and pesticides protects surface and ground water and is safer for pets and humans on the landscape. Avoiding chemical pesticides and herbicides also ends the damage to the community of soil microorganisms which are degraded. Organic stewardship also prevents the continuing buildup of unsafe chemicals in the soil and water.

A no-till strategy is also beneficial to the soil, and answers the dilemma of best practice when establishing an urban landscape of native plants, such as a wetland, prairie or forest community. Managing permanent plantings will be healthier without tilling and continually disturbing the soil. When establishing and nurturing healthy soil, especially for native perennial plants, using a system that avoids tilling has a number of

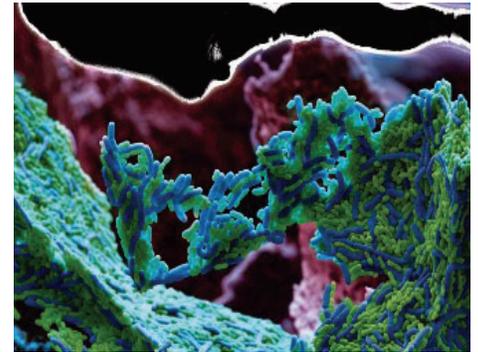
important advantages. A soil rich in biomass and having a diverse community of microorganisms is especially essential when establishing native plants which will not tolerate disturbance, or when stewarding woodland wildflowers which need a rich and undisturbed soil. Tilling the soil alters the environment for soil microorganisms, which primarily inhabit the top 3 inches of the soil. Churned and exposed, these soil communities are disturbed and often lost. Tilling will compact the soil, altering its structure and disturbing the balance of light, moisture and nutrients. Damage of this type will take a long time to recover. Tilling also creates soil erosion, both by water and by wind.

Many instructions for composting advise to mix compost at intervals. For methods such as the lasagna-style, or Ruth Stout's "No-Work Gardening Method", just layer the materials directly on the planting area. Composting by layering directly on the soil avoids disturbing the soil and perennial plants and yet provides a method for amending the soil. Mulch generously; straw makes a great thick top-mulch; unlike hay, which will have a generous portion of seeds.

Whether you make a compost pile or use the lasagna layering method, the ration of carbon to nitrogen materials should be considered. For the best performance, compost should be a ratio of 30 parts of carbon-rich material to 1 part nitrogen-rich material:

<b>Estimated Carbon-to-Nitrogen Ratios</b>			
<b>Browns = High Carbon</b>	<b>C:N</b>	<b>Greens = High Nitrogen</b>	<b>C:N</b>
Ashes, wood	25:1	Alfalfa	12:1
Cardboard, shredded	350:1	Clover	23:1
Corn stalks	75:1	Coffee grounds	20:1
Fruit waste	35:1	Food waste	20:1
Leaves	60:1	Garden waste	30:1
Newspaper, shredded	175:1	Grass clippings	20:1
Peanut shells	35:1	Hay	25:1
Pine needles	80:1	Manures	15:1
Sawdust	325:1	Seaweed	19:1
Straw	75:1	Vegetable scraps	25:1
Wood chips	400:1	Weeds	30:1

To enhance the soil for woodland wildflowers in a shaded forest planting, which prefer a slightly acidic soil, add pine bark fines (pine or hardwood bark fines, not wood mulch) and coffee grounds, either to a compost pile or by layering lasagna-style directly onto the soil.



**The microorganisms in rhizosphere are stained blue and green to make them visible; the rhizosphere is the region of soil directly influenced by root secretions and associated soil microorganisms.**

## Organisms in a healthy soil

(by prof. P. Douillet)

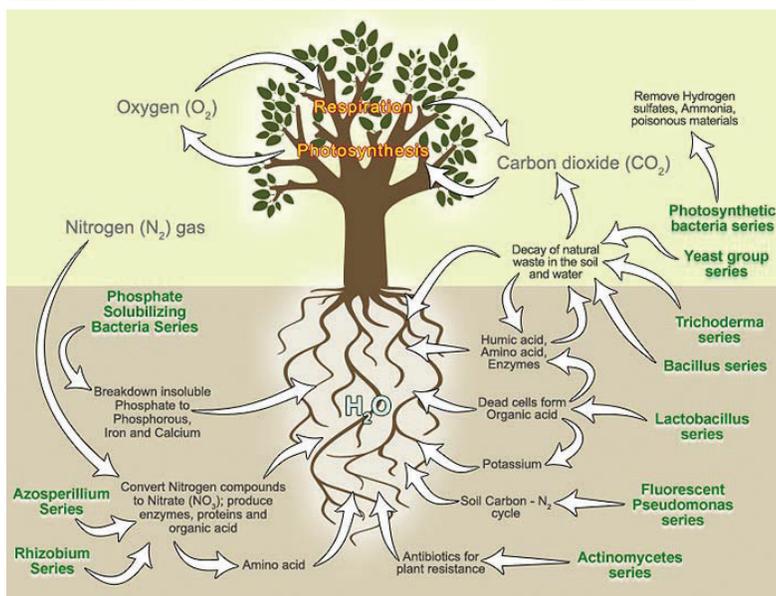
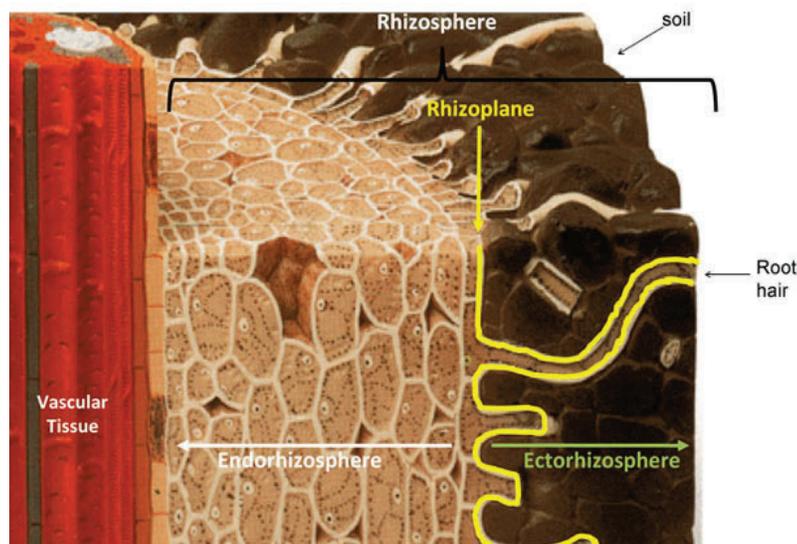
Organism	Number/ ha	Kg / ha
Bacteria	2,000,000,000,000,000,000	2,914
Actinomycetes	50,000,000,000,000,000	1,457
Fungae	500,000,000,000,000	2,914
Algae	9,884,000,000	101
Protozoa	5,000,000,000,000	101
Nematodes	197,680,000	50
Arthropodes	20,163,360	930
Worms	98,840	499

### Soil Restoration: Lasagna Gardening, or Sheet Mulching:

- Cut grass, weeds, etc. as short as possible, to the bare ground.
- Plants with deep roots that will require a large hole should be planted at this point; woody plants, shrubs, trees, potted perennials, large transplants.
- Water generously; rain won't soak in well until the weed barrier begins to decompose. Water also gets the decomposition going.
- Layer compost; make the layers thin, with a good carbon-to-nitrogen ratio just as you would in building a good compost pile. Materials that contain seeds (such as fresh manure or hay) need to be layered over a dry carbon layer such as leaves or straw.
- Lay down the weed barrier, which must be biodegradable. This can be layers of newspaper or cardboard. Large heavy cardboard sheets such as used to pack appliances are especially good for an area which had previously been in sod or weedy. Overlap the edges a good six inches to prevent weeds from breaking through.
- Leave a breathing space around established plants; either by cutting holes in the weed barrier, or laying out the barrier to leave breathing space.
- Layer on a weed-free organic compost, alternating with nitrogen-rich materials such as grass clippings, and carbonaceous materials such as weed-free straw.
- Top-mulch at least 3 inches deep; water the area well.
- The bed is ready for planting, as long as your top layers are well-seasoned compost and not fresh manure. Cut an X for transplanting a large plant, and peel back the corners. Add fresh compost in the planting hole, set the plant in and pull the top mulch around the plant.
- Seeds can also be planted in the new bed; water well, as compost will dry out quickly until the underlying weed barrier decomposes.

### References:

- Edible Forest Gardens, Ecological Design and Practice for Temperate Climates*, by Dave Jack and Eric Toensmeier
- Lasagna Gardening – A New Layering System for Bountiful Gardens; No Digging, No Tilling, No Weeding, No Kidding!* By Patricia Lanza
- One Straw Revolution; An Introduction to Natural Farming* by Masanobu Fukuoka
- How to Have a Green Thumb Without an Aching Back* by Ruth Stout
- The New Organic Grower* by Elliot Coleman
- Losing Ground* by the Environmental Working Group:  
[www.ewg.org/losingground/report/executive-summary/2.html](http://www.ewg.org/losingground/report/executive-summary/2.html)
- For a good discussion of composting (including a list of ratios of carbon-to-nitrogen for each material), check out this link:  
[www.planetnatural.com/composting-101/making/c-n-ratio/](http://www.planetnatural.com/composting-101/making/c-n-ratio/)
- McNear Jr., D.H. (2013): The Rhizosphere – Roots, Soil and Everything In Between. *Nature Education Knowledge*  
[www.nature.com/scitable/knowledge/library/the-rhizosphere-roots-soil-and-67500617](http://www.nature.com/scitable/knowledge/library/the-rhizosphere-roots-soil-and-67500617)



# WEB RESOURCES

## **ASTRONOMY & METEOROLOGY**

<a href="http://www.noaa.gov">www.noaa.gov</a> .....	National Oceanic & Atmospheric Administration
<a href="http://www.ngdc.noaa.gov">www.ngdc.noaa.gov</a> .....	National Geophysical data center
<a href="http://www.hubblesite.org">www.hubblesite.org</a> .....	Hubble Telescope
<a href="http://www.nasa.gov">www.nasa.gov</a> .....	National Aeronautics and Space Administration
<a href="http://www.skyandtelescope.com">www.skyandtelescope.com</a> .....	Astronomy site
<a href="http://www.skyandtelescope.com/observing/skychart/article_1220_1.asp">www.skyandtelescope.com/observing/skychart/article_1220_1.asp</a> .....	(daily local sky chart)
<a href="http://www.usno.navy.mil">www.usno.navy.mil</a> .....	U.S. Naval Observatory (including moon phases)
<a href="http://www.tycho.usno.navy.mil/vphase.html">www.tycho.usno.navy.mil/vphase.html</a> .....	Virtual Reality Moon Phase Pictures
<a href="http://www.mlo.noaa.gov">www.mlo.noaa.gov</a> .....	Mauna Loa Observatory
<a href="http://www.whoi.edu/institutes/occi/currenttopics/ct_abruptclimate.htm">www.whoi.edu/institutes/occi/currenttopics/ct_abruptclimate.htm</a> .....	Climate Change

## **GEOLOGY**

<a href="http://www.usgs.gov">www.usgs.gov</a> .....	United States Geological Survey
<a href="http://www.scotese.com">www.scotese.com</a> .....	Paleomap Project
<a href="http://www.vulcan.wr.usgs.gov">www.vulcan.wr.usgs.gov</a> .....	Cascades Volcano Observatory
<a href="http://www.drgeorgepc.com">www.drgeorgepc.com</a> .....	The Tsunami Page

## **FEDERAL AND STATE AGENCIES**

<a href="http://www.dnr.state.il.us">www.dnr.state.il.us</a> .....	Illinois Department of Natural Resources
<a href="http://www.fws.gov">www.fws.gov</a> .....	U.S. Fish and Wildlife Service
<a href="http://www.fs.fed.us">www.fs.fed.us</a> .....	USDA Forest Service
<a href="http://www.nps.gov">www.nps.gov</a> .....	National Park Service

## **CONSERVATION & PRESERVATION**

<a href="http://www.amrivers.org">www.amrivers.org</a> .....	American Rivers
<a href="http://www.nature.org">www.nature.org</a> .....	The Nature Conservancy
<a href="http://www.naturalarea.org">www.naturalarea.org</a> .....	Natural Areas Association
<a href="http://www.lta.org">www.lta.org</a> .....	Land Trust Alliance
<a href="http://www.oceanconservancy.org">www.oceanconservancy.org</a> .....	Ocean Conservancy
<a href="http://www.audubon.org">www.audubon.org</a> .....	Audubon

## **SUSTAINABLE**

<a href="http://www.buildinggreen.com">www.buildinggreen.com</a> .....	Green construction design
<a href="http://www.rmi.org">www.rmi.org</a> .....	Rocky Mountain Institute: sustainable energy & natural capitalism
<a href="http://www.attra.org">www.attra.org</a> .....	National Sustainable Agriculture Information Service
<a href="http://www.permacultureinternational.org">www.permacultureinternational.org</a> .....	Permaculture International Ltd.
<a href="http://www.seedballs.com">www.seedballs.com</a> .....	Sustainable agriculture, ecology
<a href="http://www.strawrevolution.com">www.strawrevolution.com</a> .....	More on sustainable living

# FOREST PRESERVE SITES

## Shannon Bayou Environmental Education Center and Administrative Office

This 46-acre preserve is located at 3301 Waldron Road in Aroma Park, along the Kankakee River. The Center provides space for programs about natural history, ecology and preservation of open space in the Kankakee River Valley. The walking trail area features plantings of many native trees and plants, including native tallgrass prairie species, a butterfly garden of native plants. The site includes ¾ mile asphalt and fine gravel walking trail, a picnic shelter, and picnic tables.

3301 Waldron Road  
Aroma Park, IL 60910  
41°04'47.61N  
87°48'44.31"W

## Aroma Land and Water Reserve

One of the best sites in the area for woodland wildflowers, this 140 acre site is located on Hieland Road, 1.4 miles south of Highway 17 East. A 1.2 mile walking trail winds through several different types of natural areas, including high quality forest, prairie, and wetland ecosystems. It also has nearly ¼ mile of Kankakee River frontage, and the associated floodplain forest.

The Forest Preserve mows a loop trail that branches off the existing 1 ¼ mile trail that meanders through the main body of the Aroma LWR. In the summer of 2011, 49.5 acres of mixed pine and hardwood forest was added.

Approximately 40 percent of the Aroma Preserve is a wetland and lies within the flood plain of the Kankakee River. In the spring, the wet oak forest gives a spectacular wildflower display while the wetland and sand prairie are the most colorful in the summer. There is ample parking in the parking lot on Hieland Road, and a playground, maintained by the Kankakee River Valley Park District, for children.

1578 South Hieland Road  
St. Anne, IL 60964  
41°06'02.90"N  
87°45'24.08"W

## Gar Creek Trail and Prairie Restoration

Approximately 85 acres, this site is located about one-half mile east of Route 45 on River Road adjacent to Kankakee Community College. The 16-acre restored tall grass prairie was planted in 1992. A 2.5 mile trail, suitable for hiking, bicycling, and cross country skiing, is a cooperative project with the Kankakee Valley Park District. The trail begins at the prairie, winds along Gar Creek, through oak woodland, and down to the banks of the Kankakee River.

At river's edge, the trail connects with the Kankakee Riverfront Trail Project, which starts at the Aqua Illinois property at Hawkins and Water Streets, goes through Shapiro Developmental Center, Kankakee River Valley Forest Preserve, Kankakee Community College, and connects with River Road Park and Splash Valley, of the Kankakee Valley Park District.

501 River Road  
Kankakee, IL 60901  
41°05'30.84"N  
87°51'32.78"W

## Waldron Arboretum

Located 1.1 miles south of I-57, this site was once a landscape nursery. On this 90 acre site there is a fine gravel hiking trail suitable for bicycling and cross country skiing. The trail winds through 30 acres of woods, including a small prairie restoration area.

In the winter of 2008, the District acquired an additional 60 acre parcel which had been primarily in agriculture. Future development plans are pending based on the districts needs and funds available through federal and state grants.

2755 Waldron Road  
Aroma Park, IL 60910  
41°05'36.28"N  
87°49'26.51"W

## Hieland Lakes Nature Preserve

The Forest Preserve has a new site located about three miles east of Kankakee on Route 17. The new site is 64 acres, including two connected lakes. An aquatic survey will be conducted to determine the fish population; mean-

while, limited fishing is allowed. Bluegill may be kept by anglers - all other fish are catch-and-release.

Plans for the site include planting native wildflowers, prairie restoration and creation of a walking path. At this time, there is a mowed walking path, a parking lot, fencing, and a bridge at the point where the two lakes connect.

The site is a former sand gravel quarry, and while at this time, before restoration gets underway, there is not much in the way of native ecosystem remaining, the site offers a sparse population of native plant life, the area is abundant with wildlife such as deer, fox, coyote, and waterfowl including wood ducks, great blue heron and egret.

6692 Route 17 East  
St. Anne, IL 60964  
41°7'02.23"N  
87°44'24.82"W

## Strasma Grove

Nestled in a neighborhood on in Kankakee, this site is 2 acres of mature native trees.

Duane Boulevard  
Kankakee, Illinois 60901  
41°06'28.33"N  
87°50'43.56"W

## Limestone Reforestation Site

This site is a 30 acre preserve and reforestation site, with mixed trees and grasses.

County Road 3750 West  
Kankakee, Illinois 60901  
41°08'38.96"N  
87°56'51.08"W

## Zeedyk Meadows

Four acres of trees and grasses.  
Warren Street

St. Anne, Illinois 60964  
41° 06' 24.92" N  
87° 44' 35.77" W

## Snake Creek Preserve

5800 Darline Dr  
St Anne, IL 60964  
41.109752, 87.756308



## ***Kankakee River Valley Forest Preserve District***

3301 Waldron Road • P.O. Box 13  
Aroma Park, Illinois 60910  
815-935-5630

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E-mail: [forest@krvfpd.org](mailto:forest@krvfpd.org)

Facebook <https://www.facebook.com/KRVFPD/>

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# **ON TRAIL...**

## *at the Forest Preserve*

For information on times and dates for current programs at your forest preserve, call Jean Hurrle at 815-549-9072. Our programs include moonlight hikes, wildflower and native prairie walks, and local natural history. You can also find our programs advertised in the Outdoor section of The Daily Journal, or check out "programs" on our website: <http://www.krvfpd.org>

But when I consider that the nobler animals have been exterminated here - the cougar, panther, lynx, wolverine, wolf, bear, moose, deer, the beaver, the turkey, etc., etc. - I cannot but feel as if I live in a tamed, and as it were, emasculated country... I listen to a concert in which so many parts are wanting... for instance, thinking that I have here the entire poem, and then, to my chagrin, I hear that it is but an imperfect copy that I possess and have read, that my ancestors have torn out many of the first leaves and grandest passages.

- Henry David Thoreau, *Journal*, 1856

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