

Public Is Invited

Marietta Natural History Society

Summer 1999 Newsletter



Land Rescue Take Two

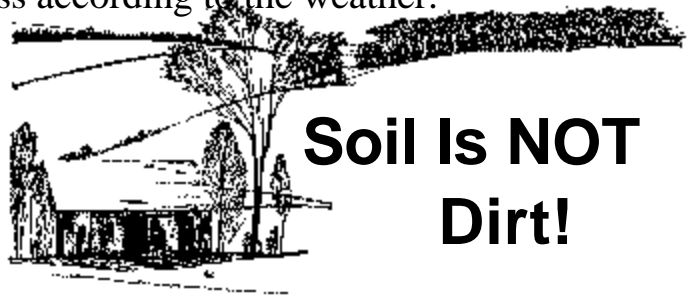
Thursday, July 8, 6:30 PM
Meet at Hermann Fine Arts Center
parking lot, Marietta College
Leader: Pat Feeley

This year we plan again to visit a stripmine area near Lower Salem. Pat Feeley, a Civil Engineering Technician for the Natural Resources Conservation Service, will show us an unreclaimed stripmine and the wetlands constructed as a result of reclamation. We will learn about problems generated by abandoned stripmines and the suitability of the reclaimed lands for wildlife. Wear walking shoes and dress according to the weather.



Thursday,
August 12, 6:00 PM
Meet at Hermann Fine
Art Center parking lot,
Marietta College

Leader:
Jim Mills



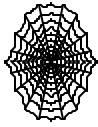
Soil Is NOT Dirt!

Thursday, September 9, 6:00 PM
Meet at Hermann Arts Center parking lot
Leader: Gordon Gilmore

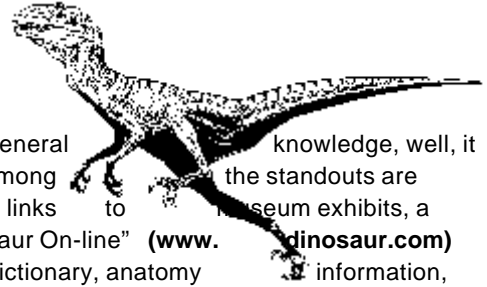
Jim Mills, MNHS member, will lead a walk along a 2 mile section of the abandoned Marietta and Cleveland Railr (1872) along Duck Creek near Salem. Let's see how nature | grown around this old railway Note earlier meeting time. Wear walking shoes and dress according to the weathe



A field trip to the Oak Grove farm of Bill and Janet Stacy where USDA Soil Scientist Gordon Gilmore will describe the formation and composition of soil in specially constructed soil pits. Let's learn about the value of prime farmland. Note earlier meeting time. Wear walking shoes and dress according to the weather.



Web Threads

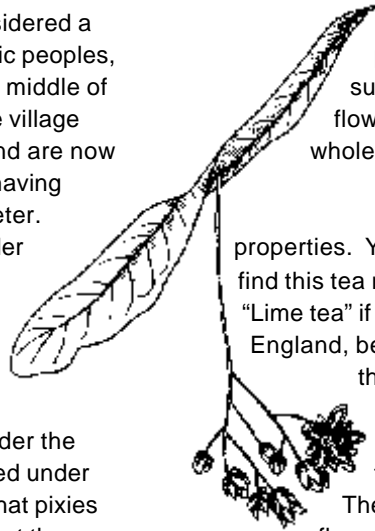


Dinosaur Digs! Need information about dinosaurs for school reports or general knowledge, well, it should come as no surprise that there are many web sites to choose from. Among the standouts are "Dino Russ's Lair" (www.isgs.uiuc.edu/isgsroot/dino/dinos_home.htm) with links to museum exhibits, a virtual dinosaur dig, and inside scoop (so to speak) on dinosaur eggs. "Dinosaur On-line" (www.dinosaur.com) retails fossil replicas and provides a dinosaur 'omnipedia', which includes a dictionary, anatomy information, maps and charts of geologic time periods. Also check out the "Dinosaur Pages" (www.gl.umbc.edu/~tkeese1/dinosaur/index.htm) which briefly describes all dinosaur genera and their close relatives.

Honey, Helicopters, and Lovers by Almuth Tschunko, Dept. Of Biology, Marietta College

The Linden tree was considered a holy tree by the old Germanic peoples, who planted a Linden in the middle of each village. Some of these village Lindens are still standing and are now over a thousand years old, having stems 13 to 16 feet in diameter. Court was officially held under the Linden, village affairs were negotiated under the Linden, lovers favored meeting under the Linden, dances and feasts and weddings were held under the Linden, and the elderly rested under the Linden. Folklore has it that pixies live under the Linden, and that the Linden protects against lightning and absorbs illnesses. This long history is the basis for the Linden being mentioned in so many old German folksongs and literary works, and is the basis for the German fondness even today for the Linden. Lindens are still widely planted in Europe as a shade tree along streets and avenues, and in town squares and cemeteries.

The American Linden (*Tilia americana*), called Basswood by foresters, is typically 60-80 feet tall, but can reach 130 feet in rich moist soil. Its four varieties used to be classified as separate species. The American Linden is similar to the several species in Europe and Asia. The Lindens have a very distinctive feature: they produce a loose flower cluster at the end of a long stalk, with the basal half of this stalk being fused along the midrib of the basal half of a special long narrow leaf (bract). The fragrant, nectar-rich, cream-colored flowers that appear in June and July



are a valued bee pasture, resulting in a superior honey. The flowers are also harvested whole to make Linden flower tea, said to have therapeutic properties. You will sometimes find this tea misleadingly labeled "Lime tea" if it came from England, because the British use the name "Lime" for the Linden (although the Linden is not related to the citrus Lime). The expensive "lime-flower oil", used in the perfume industry, is distilled from the flowers of a European species of Linden.

The Linden flowers develop into hard, pea-sized nutlet fruits. Dispersal occurs when the long narrow wing-like bract plus its attached nutlet-bearing stalk detach as one unit, and twirl away like a helicopter in the breeze. The nutlets are edible, also favored by grouse, quail and rodents.

The Linden's true leaves are shaped not at all like the bracts but rather are heart-shaped with uneven leaf bases. The leaf margins are toothed.

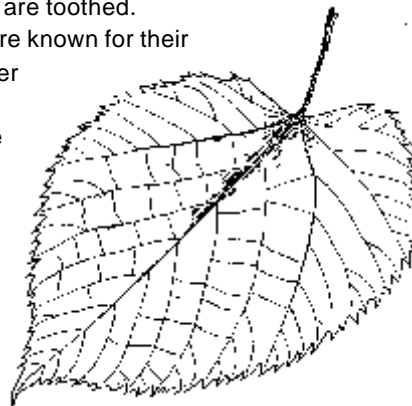
Linden trees are known for their tough fibrous inner bark. In Europe, these fibers were extracted and used extensively in weaving baskets and mats, as well as for cordage. The Native

Americans have for hundreds of years also used these bark fibers to make rope, claiming that it was superior to others of the white man in that it was softer on the hands when wet and did not kink and tangle when dry. Fresh inner bark, said to be antiseptic, has been used by Native Americans as well as Europeans to bind wounds in emergencies.

See *Tilia*, pg 5

Water Ways

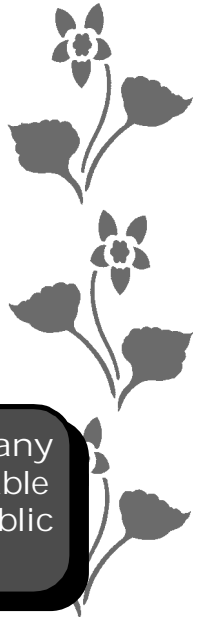
Despite the dry spring we had this year, there's good news from the U.S. Geologic Survey. The most recent data for 1995 shows that U.S. per-capita water consumption was 2% lower than in 1990 and 10% lower than in 1980. This is a welcome change since our water use had increased steadily since 1950. Nevertheless, U.S. thirst for water remains high at 1280 gallons per person per day. Let's hope that the trend has continued since 1995.



July 1999

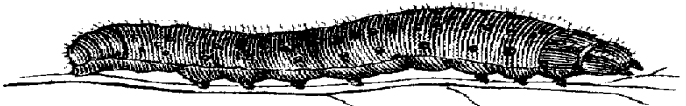
Sun	Mon	Tue	Wed	Thu	Fri	Sat
The cone of the eastern hemlock is but 1/2" long, yet produces up to 200,000 seeds						
<div style="display: flex; justify-content: space-between;"> 1 2 3 </div>						
<div style="display: flex; justify-content: space-between;"> 4 5 6 7 8 9 10 </div>						
Independence Day		X		MNHS Meeting		
<div style="display: flex; justify-content: space-between;"> Mosquitos Active; Use Citronella Not Raid Listen For Nighthawk Calls In Evenings </div>						
<div style="display: flex; justify-content: space-between;"> 11 12 13 14 15 16 17 </div>						
Goldfinches Gathering Thistle Fluff For Their Nests	Δ			Venus Below Crescent Moon		
<div style="display: flex; justify-content: space-between;"> "When Grass Is Dry At Morning Light, Look For Rain Before The Night" </div>						
<div style="display: flex; justify-content: space-between;"> 18 19 20 21 22 23 24 </div>						
Look for Wasps Making Paper Nests	Insect Night Chorus Tuning Up	E		Admire A Spider Web		
<div style="display: flex; justify-content: space-between;"> Spider Silk Is Strongest Natural Fiber Known Monarch Caterpillars Feeding On Milkweed Leaves </div>						
<div style="display: flex; justify-content: space-between;"> 25 26 27 28 29 30 31 </div>						
Water Moves In Some Trees At 100 Ft/Hr			A	Butterfly Gardens Are In Full 'Wing'		

Suggestions, Comments or Contributions for the MNHS Newsletter? Send them to the editor: 625 5th St Marietta, OH 45750 374-8778 spilatrs@marietta.edu



Don't forget that videos of many previous programs are available at the Washington County Public Library

Kids and adults alike love to touch Jewelwee (touch-me-not) seed pods and cause them to burst open. Reportedly seeds can be thrown 10 feet or more. This is a good time to find a Jewelwee and check this out.



August 1999

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
<div style="display: flex; justify-content: space-between;"> X </div>						
<div style="display: flex; justify-content: space-between;"> Female Housefly Lays Several Hundred Eggs Which Hatch in about 12 Hrs A Teaspoon Holds More Molecules Of Water Than The Atlantic Holds Teaspoons Of Water </div>						
<div style="display: flex; justify-content: space-between;"> 8 9 10 11 12 13 14 </div>						
The Tongue of A Toad Can Be 2 Inches Long			Δ	MNHS Meeting	Persied Meteor Shower Best 1:30 To Sunrise	
<div style="display: flex; justify-content: space-between;"> Pheromone Of Moth Can Attract Male 2 Miles Away </div>						
<div style="display: flex; justify-content: space-between;"> 15 16 17 18 19 20 21 </div>						
			E	Orville Wright Born 1871	"A Mackerel Sky, Not 24 Hrs Dry"	
<div style="display: flex; justify-content: space-between;"> Be Sure To Water Young Trees During Dry Periods </div>						
<div style="display: flex; justify-content: space-between;"> 22 23 24 25 26 27 28 </div>						
Tread Lightly Around Lichens, Some Take A Century To Grow 1 Inch			A	Songbird Fall Migration Begins		
<div style="display: flex; justify-content: space-between;"> 29 30 31 </div>						
			Jupiter Just Above Moon Before Sunrise	It takes about 150 gallons of water to grow wheat for 1 loaf of bread		

September 1999

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
<div style="display: flex; justify-content: space-between;"> X </div>						
<div style="display: flex; justify-content: space-between;"> Does Your Garden Contain Loam? Equal Parts Silt & Sand, Less Than 20% Clay </div>						
<div style="display: flex; justify-content: space-between;"> 5 6 7 8 9 10 11 </div>						
	Labor Day			MNHS Meeting		
<div style="display: flex; justify-content: space-between;"> Rotation Of Moon Takes 29.53059 Days Migration of Green Darner DragonFlies </div>						
<div style="display: flex; justify-content: space-between;"> 12 13 14 15 16 17 18 </div>						
Scientists Estimate 250,000 Tons Of Ragweed Pollen Are Produced Each Year In The U.S.					E	
<div style="display: flex; justify-content: space-between;"> 19 20 21 22 23 24 25 </div>						
		Monarchs On Way To Mexico		Autumn begins		A
<div style="display: flex; justify-content: space-between;"> Lake Erie Began As A Puddle Of Glacial Melt Water 12,000 Years Ago </div>						
<div style="display: flex; justify-content: space-between;"> 26 27 28 29 30 </div>						
Toilets 45%	Bathing 30%	Laundry & Dishes 20%	Drinking & Cooking 5%			
<div style="display: flex; justify-content: space-between;"> These Are Avg. Indoor Residential Water Use </div>						

Kudzu — a good thing gone bad

By Steven R. Spilatro

In our series of articles about 'alien invaders'— non-native species that are creating havoc in their adoptive ecosystems—we cannot ignore kudzu. Kudzu (*Pueraria lobata*), primarily a warm climate plant, has blanketed over a million acres of the southeastern U.S.; however, Marietta has its own resident population, one of the most northerly in the country. You can see it firsthand and witness its invasiveness along Muskingum Drive, on the hillside below Marietta Memorial Hospital. Kudzu is the coarse viney plant with the three-part leaves, and in the fall, clusters of flat seed pods.

Unlike some other exotic species such as the zebra mussel that were introduced accidentally, kudzu was intentionally brought to the U.S. from Japan and exhibited in the 1876 Philadelphia Centennial Exposition. Intended first as an ornamental vine, kudzu's prestige grew by helping to control soil erosion and providing inexpensive forage for livestock during the depression years. Indeed, the Muskingum Drive population was planted in 1939 to halt erosion. Since kudzu is a legume it has nitrogen-fixing ability that actually helps to

and a coarse cloth is made from the stem. The plant reputedly also has medicinal uses. To learn more about the many uses of kudzu see the web sites identified below. You might also want to attend the annual kudzu festival this September in Blythewood, SC.



Unfortunately, kudzu is also extraordinarily aggressive. As you can see along Muskingum Drive, where kudzu grows nothing else can compete. Its hardiness comes from the deep taproot which affords drought resistance, lack of natural insect pests and disease agents, and a gendary growth rate. The perennial taproot produces a thick mat of tendrils each spring. Growing 60 feet in a season, and, allegedly, 12 inches a day, the plant has been branded the "mile-a-minute vine" in some areas. The vines swallow everything in their path—



hospital sometime next century.

The USDA removed kudzu from its list of permissible cover crops in 1953, and the Soil Conservation Service began restricting its recommended usage in 1962. Its final fall from grace came in 1970 when the USDA declared kudzu a common weed in the southern states.

Like most efforts to control exotic species, these actions were too little too late. Kudzu continues to spread in the southern states. Although it is not spreading extensively in our area, the local population is firmly entrenched and healthy.

Mosquito News?

Researchers at the University of London recently reported that a new species of mosquito is evolving in the London Underground system. Believed to be descended from a species that normally feeds on birds, the mutants have adapted to new food sources—rats, mice and maintenance workers.

The subterranean mosquitos are believed to have evolved from mosquitos that inhabited the tunnels in the 19th century, and are almost impossible to mate with the bird feeding variety. The Underground is an ideal habitat for mosquitos, with moderate temperatures and pools created by water leaks.

Exotic Species Workshops

If you are interested in learning more about threats of non-native species, you may wish to attend one of the free public workshops conducted around the state by the Division of Natural Areas and Preserves. The workshop to be held closest to our area will be at Hocking Hills State Park on September 11. For more information call (614) 265-6453.

improve soil quality. During World War II, some communities formed "kudzu clubs" and elected "kudzu queens."

Indeed, kudzu has many admirable qualities. Besides using the leaves for forage, the Japanese and Chinese employ much of the plant. Starch from the roots is used to make flour,

fences, fields, and forests.

The Marietta population is slowly moving up the hillside as it blankets and kills the bordering vegetation. Unlike kudzu further south, most of the seed produced by our population is not viable, and the plants spread only vegetatively. Nevertheless, left unchecked, it should consume the

Further information on kudzu can be found in an article by Ken Hampton, *Kudzu—a Conservation Story Turned Sour*, in *Conservation News*, Vol 44, pages 11-14, 1979. Also, *The Amazing Story of Kudzu* (<http://www.cptr.ua.edu/kudzu.htm>) and the National Biological Information Infrastructure's (NIIB) Kudzu pages (<http://www.nbi.gov/invasive/Kudzu/Kudzu.html>) are informative web sites with links to many other web pages about kudzu.



Recycled Paper
50% Total Recovered Fiber
20% Post-Consumer

Pinched Poachers Pay Premium Penalty by Steven R. Spilatro

During July of last year, the Japanese-owned Tennessee Shell Company pled guilty to purchasing thousands of pounds of freshwater mussels illegally taken from rivers in Michigan, Kentucky, West Virginia, and Ohio. The company will pay a \$1 million fine after pleading guilty to a felony Lacey Act count, the largest amount ever paid in for illegal, commercial exploitation of a wildlife resource. The success of law enforcement agencies in Tennessee will help to protect the freshwater mussels here in Ohio.

The investigation involved a number of cooperating government agencies including the U.S. Fish and Wildlife Service, State Wildlife agents, and the Justice Department. The case involved a four year investigation into the company's multimillion dollar business in freshwater mussel shells. A federal Grand Jury in Jackson, Tennessee has also indicted 20 individuals on 136 counts of violating the Lacey Act, and 19 had pleaded guilty as of July of last year. Nearly \$67,000 in restitution has resulted, along with prison sentences.

Freshwater mussels are one of the most threatened groups of organisms in the United States. According to the FWS, of approximately 300 known species, 30 are extinct and another 70 are listed as endangered or threatened. A variety of affronts have triggered their decline. Damming of riverways slowed the current, allowing sedimentation that obliterated many mussels beds. Also, since mussels obtain food by filtering microorganisms, they accumulate toxins present in the water.

Illegal collecting is encouraged by high prices paid by the Asian cultured pearl industry. Cultured pearls are created by implanting a small object into the living tissue of an oyster. Oysters respond to the irritant by covering it with nacre (pronounced 'né-ker') — the mineral essence of natural pearls. Normally, 2 - 3 years

are required for enough nacre to accumulate (a few millimeters) to yield a mature cultured pearl.

The cultured-pearl industry expanded greatly after the discovery that freshwater mussel shells are particularly suitable for this purpose. Every year, thousands of tons of U.S. freshwater mussels are shipped to the Orient, where they are milled into small spheres and used to 'seed' oysters. The larger, thicker shells of mussels from the South and Midwest are in great demand because they yield larger beads.

Trade in freshwater mussels is not illegal as long as the mussels are collected legally—a simple rule ignored by the Tennessee Shell Company in its anxiousness to meet demand, and reap the profits. Laws governing mussel collection vary with states. For example, essentially no restrictions on mussel collecting exist in Pennsylvania and South Carolina, whereas in Illinois and Tennessee it is legal to harvest mussels of certain sizes in certain waterways. Collecting of freshwater mussel is entirely prohibited in Ohio and Michigan. In Ohio, it is illegal to even possess freshwater mussel shells.

Unfortunately, over-harvesting of mussels where collection is legal has greatly increased poaching in other areas, including the Muskingum River. The Muskingum River possesses one of the highest diversities of mussel species, including several listed as threatened or endangered.

Unfortunately, poaching in our area does occur, but efforts by Charlie Stone, an area Ohio Division of Wildlife officer, resulted in arrests in 1991 and 1996 of poachers who had traveled to our area from Tennessee.

The \$1 million fine paid by the Tennessee Shell Company will go to the National Fish and Wildlife Foundation, an organization established by Congress to assist the

FWS in raising funds for wildlife conservation. The fine will be used to establish the Freshwater Mussel Conservation Fund, which will support freshwater mussel research and recovery.

More information on the illegal freshwater mussel trade and the Tennessee Shell Company case can be found in a FWS news release available at www.fws.gov/r4eao/visit/98-063.html and in "Shell Game" an article in the January-February 1997 issue of Audubon. A more detailed description of the Lacey Act is available as a FWS Fact Sheet at www.fws.gov/r4eao/media/lacey.html

Tilia, con't from page 2

The light, soft, pale Linden wood has been long prized by woodcarvers—from Europeans carving altarpieces to cabinetmakers to organ builders to Iroquois carving face masks. The wood of a European species of Linden is also used to produce an excellent artist's charcoal.

It may take awhile for a Linden tree to get started (its seeds can take two years to sprout), but once started, it grows quite rapidly and is hard to kill. After a Linden tree is cut, the stump will sprout prolifically. The resprouting ability is a survival advantage since young Lindens are often cropped by rabbits and deer.

And finally, if you want to have some fun, go up to a Linden and slap the trunk: it sounds like a water-

melon! And if it's autumn, go ahead and have some Linden helicopter races. (But watch out for the pixies!) The Marietta City Tree Commission reports that there are over 50 Linden trees in city parks and lawn strips. Two can be found at the south end of Front near the Ohio River levee.



Dues due?

If you haven't paid your 1998 dues, this will be the last newsletter you will receive. What an unbearable thought! A red dot next to the mailing address indicates that this woeful state of affairs applies to you!



The MNHS Vision

- i To foster awareness of and sensitivity to our environment and its biodiversity**
- i To provide a place where people with these interests can gather for information and activity**
- i To create a presence in our community representing these ideas**



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