



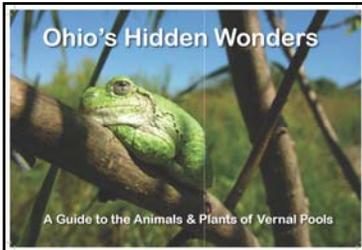
A non-profit Ohio organization

Ohio Wetlands Association

Newsletter - August 2016

Our Mission

Ohio Wetlands Association is dedicated to the protection, restoration and enjoyment of Ohio's wetlands and associated ecosystems through science-based programs, education and advocacy.



On sale at www.OHwetlands.org

2016 Wetlands Summit



"Life on the Edge: Where Humans Meet Wetlands."

The scrimmage between natural wetlands and human enterprise has been a lopsided game. In Ohio, more than 90% of our wetlands are gone. Those that remain are often at risk. They are on the edge. Wetlands are some of the most regulated and protected ecosystems, yet continue to suffer from exposure to human interests.

But, is the line of scrimmage moving? Are wetlands poised to gain some ground? Will the momentum in this game shift? Restoration and mitigation efforts are constructing and healing wetlands across the region. So, how do we keep score? At the 2016 Wetlands Summit we will explore the theme "Life on the Edge" with an exploration of the wetland health metrics and restoration practices.

Join us on September 10, 2016, from 9 a.m. - 4 p.m. at Fellowship Hall, 3909 Broadview Road, Richfield, Ohio.

Presentations will reveal the current status and trends of wetland condition, monitoring and survey efforts, and restoration and recovery of regional wetlands.

The Summit registration includes the speaker presentations, lunch, and Sunday field trips. Prices: OWA and SWS members - \$30, Nonmembers - \$35, and Students - \$25. **Student scholarships available!**

The Summit is open to the public and we invite members, students, and nonmembers to join. To register visit www.OHwetlands.org

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Evening Social and Rodeo Dinner Buffet

September 10th, 5:30 p.m. - 9 p.m.

Regal Beagle Pavilion, Bath Nature Preserve, 4240 Ira Road, Akron, OH 44333. Price: \$25.

This is a BYOB event at the former Firestone Estate. The Evening Social includes light appetizers and your own beverage and the Rodeo Dinner Buffet includes BBQ chicken, St Louis style ribs, macaroni and cheese, baked beans, cole slaw, rolls and butter, and make your own s'mores. Lara Roketenetz, the Field Station Manager, will provide a dinner presentation; *"Ecology at the Urban-Rural Interface - The History and Scientific Legacy of the University of Akron Field Sites"*.

The Value of Random By Ray Stewart

The National Wetland Condition Assessment (NWCA) will assess nearly 1000 wetland sites from coast to coast. Each assessment area is one half hectare, roughly one acre. The lower 48 states, more precisely called the conterminous 48 states once contained 221 million acres of wetlands. Today, an estimated 104 million acres remain, a loss of 53%. The NWCA will look very closely at 1000 half hectare sites or close to 500 acres of wetlands to determine the status (condition) and trends (comparison over time) of our wetlands.

How can a 500-acre snapshot tell the story of 104,000,000 million acres? The sites are selected using a statistical technique known as a random sample. Don't be misled by the term 'random'. In this case it does not mean haphazard or aimless as the common usage might imply. In this case 'random' should be interpreted as a 'randomly chosen' sample. In other words, the site selection is not influenced by personal bias or preference and therefore, is arguably representative of the resource.

Since each site is chosen by chance, each type of wetland and every possible condition of wetland has an equal chance of being selected. There will be swamp forests, emergent marshes, prairie potholes, salt-water tidal marshes and many other variations that qualify as wetlands. The sampling field is not taken from the entire landmass of the states but from a subset that has previously been determined to be wetland and is catalogued in the National Wetland Inventory. Of those selected, there will be pristine wetlands in their natural condition, untouched by human affairs. There will be highly degraded wetlands that have been colonized by alien invasive plants. Every condition in between may also be selected.

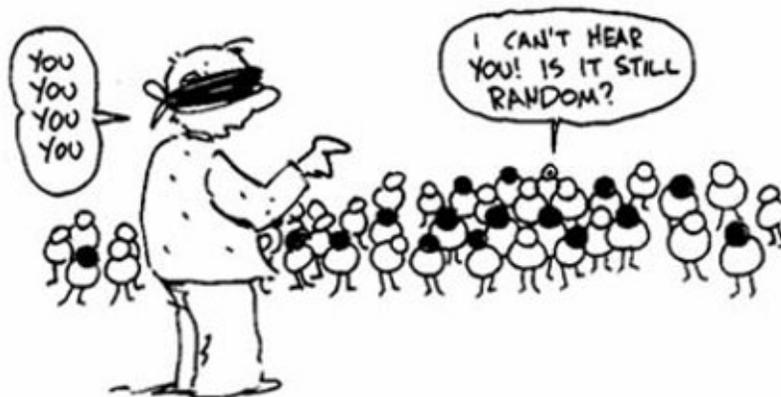
The nature of a random sample is one that defines an unbiased set of sites that represent the whole. If, for example, 10% of our wetlands are in top condition, then they should be selected one out of ten times by the random sample. The survey should then reveal that 100 of the 1000 wetlands are in top condition.

It is important to remove human bias from site selection to assure that the survey sample is representative of the whole. The NWCA survey collects many kinds of data from a site including plants, soil and water. When a team reaches a survey site, there may be some areas that are easily accessed and feature a beautiful array of wetland plants. Within the same wetland, there can also be challenging spots with soft bottoms, logs, multiflora rose and dense stands of *Phragmites*. Given a chance, most field workers would prefer the former, more pleasing site to survey. But to be

truly random, the site selection cannot be determined by surveyors' preferences but by random, statistically valid determinations made without regard for ease of access or general aesthetics.

The value of a random sample is

that a very small amount of data is truly representative of a larger condition. In this case, a relatively few wetland acres reliably represent all of the wetlands from coast to coast. The data is useful and cost effective. What is collected in just a single growing season, by a few teams of wetland scientists, gives a reasonable and representative picture of how our wetlands are really doing - critical information for our efforts to conserve, enhance and protect wetlands.



These Haymeadow Days Were the Arcadian Age for

Marsh Dwellers By Ray Stewart

A Brief History of America's Wetlands

Before North America was colonized, extensive marshes, swamps and tidal estuaries filled the spaces between land and water. They gave rise to abundant fisheries, supported waterfowl whose flocks could darken the sky and supported an ecosystem as productive and diverse as tropical rain forests or coral reefs. An epic transformation was about to take place that would erase much of the natural wealth of a nation before anyone would understand what was lost.

In recent decades, science has revealed the array of services that these wet landscapes provide. The hydrologic processes that support wetlands recharge ground water, absorb floodwaters, and clean the essential waters that we drink. These services directly support our health and economy but are seldom

considered by those who fill and drain wetlands. In fact, the construction of costly dams, levees and water treatment facilities can be traced as a direct consequence of wetland loss. Wetland loss has led to a considerable impoverishment of our fisheries. Waterfowl and other bird populations have been decimated. Nearly a third of the nations threatened and endangered wildlife cling to life in what remains of our wetlands.

Significant wetland protection efforts began in the 1960's. Yet, wetland loss continued nearly unabated for the rest of the 20th century. Legal and regulatory efforts have been riddled with loopholes, misunderstanding and conflict. Wetlands have been elevated to the most controversial habitats in America. Understandably, Americans have mostly seen wetlands under the umbrella of private property, with all the privilege we have come to expect. Historically, water has been considered public, while land is private. Wetlands were thought of as LAND that just happened to be wet. Without the science of ecology and understanding of hydrology, one would

not think otherwise.

But we now know that wetlands and public waters are integrally connected. By removing wetlands from a watershed, the river system, which is public, will be degraded. It will be subject to flash flooding, carry sediments that often clog port facilities, degrade water quality that require greater investment in water treatment facilities for public water supplies and reduce the wildlife diversity and abundance of birds, fish and land animals.

Landowners often recognized that when their neighbors ditched and drained their fields, there could be a problem with water on their own land. Farmers sought help from government and widely support ditch laws in the 19th century. Comprehensive drainage plans accompanied by technological

improvements led to a rapid and profound change to the nation's wetlands. As wetlands disappeared, sport hunters began to recognize that habitat loss was contributing to the decline in waterfowl populations. National interest in migratory birds inspired federal protection for wetlands for the first time.

These haymeadow days were the Arcadian age for marsh dwellers. Man and beast, plant and soil lived on and with each other in mutual toleration, to the mutual benefit of all. The marsh might have kept on producing hay and prairie chickens, deer and muskrat, crane-music and cranberries forever.

The new overlords did not understand this. They did not include soil, plants, or birds in their ideas of mutuality. The dividends of such a balanced economy were too modest. They envisaged farms not only around, but in the marsh. An epidemic of ditch-digging and land-booming set in. The marsh was gridironed with drainage canals, speckled with new fields and farmsteads.

*-Aldo Leopold
A Sand County Almanac*

In time, the Clean Water Act provided the strongest ever wetland protection. While wetland ecosystems are now deeply understood by environmentalists and scientists, the political environment continues its bias in favor of agriculture and development. There is a cognitive dissonance in government regarding wetlands. While some public agencies are working to protect them, others facilitate their destruction. While there are strong social, biological and economic arguments for wetland protection, vested interest and tradition still hold sway of critical land management decisions. Wetlands need advocates today as much as they ever have. The OWA is proud to be one of these advocates!

Native Planting for Residential Landscapes By Ray Stewart

In recent years, we have seen new native plant nurseries open and well established ones expand. There is a shift in the landscape paradigm moving society from commercial/mass produced plant material to plant material that serves a purpose and solves problems. OWA promotes the use of native plants in ornamental landscapes, though you may wonder why. For years we have bemoaned the effect of aggressive non-native plants taking over wetlands, particularly in response to disturbance. For example, common reed (*Phragmites australis*), purple loosestrife (*Lythrum salicaria*), reed canary grass (*Phalaris arundinacea*), and narrow leaved cattail (*Typha latifolia*) have all arisen as serious management challenges. Many native wetland plant and animal species are at risk simply because 90% + of Ohio's wetlands have disappeared. When invasive species move in, there is further risk of a loss of biodiversity. Alien aggressors have occupied and dominated upland native ecosystems as well. Many of these introduced plants have come in with the ornamental nursery and landscape trades. A shift to natives will help reduce this unnecessary ecological stress.

What are native plants? The trees, shrubs, wildflowers and many grass-like plants that would normally grow in parks, woodlots and wild places (and that did grow there before human settlement) are natives. These are the plants that were here first, before agriculture and urbanization changed the landscape in so many profound ways. Many of these plants are familiar. Trees like sugar maple (*Acer saccharum*), sycamore (*Platanus occidentalis*) and red oak (*Quercus rubra*) have filled Ohio forests and continue to grace our built up environments. Shrubs like winterberry holly (*Ilex verticillata*), spice bush (*Lindera benzoin*) and serviceberry (*Amelanchier spp.*) play important roles in natural and designed landscapes. Wildflowers of particular appeal in landscapes include swamp milkweed (*Asclepias incarnata*), wild ginger (*Asarum canadense*) and cardinal flower (*Lobelia cardinalis*). These perennial plants come back each year and often fill in with more plants each season. Grass-like plants play an important role, providing deep color and texture are common rush (*Juncus effusus*), little bluestem

(*Schizachyrium scoparium*), and Pennsylvania sedge (*Carex pennsylvanica*). Among the non-seed plants that work well in shade are the many ferns, maidenhair fern (*Adiantum pedatum*), royal fern (*Osmunda regalis*) and New York fern (*Thelypteris novaboracensis*).

Why use native plants? The advantages of using natives includes that they:

- cost less and save homeowner time due to lower maintenance requirements;
- save water because natives are best suited for an Ohio climate;
- do not require fertilizers or pesticides.

By using native plants, you are doing more than avoiding the accidental introduction of unwanted plants. You are also providing plant material that is compatible with other forms of wildlife and may serve as a seed source for adjacent habitats. Natives are good for wildlife because these are the plants that are a part of the natural community. Wildlife will find specific features that they depend on for food, nesting materials and shelter. In

contrast, many commercially-developed plants have exaggerated features like unusually large flowers. One of the tricks that the horticulture trade uses doubles the number of flower petals that are produced in a single flower. Often this is done at the expense of pollen and nectar. Without these, pollinators that are drawn to these plants (based on their appearance or fragrance) end up wasting their time and energy, frustrated by the absence of essential nutrients. Therefore, although these plants may be appealing to human consumers, they may lack some

essentials for wildlife.

Where can a landowner purchase native plants? Most of the native plants mentioned here can be found in the commercial nursery trade. Though they may not be in large quantities, a motivated consumer can usually find what is needed. If you don't find the selection of native species you'd like to see at your local nursery, ask for them! If enough native plant enthusiasts step forward and make their purchasing intentions known, we'll see improved native plant selections at our local nurseries in the future!



Native Bee on Swamp Milkweed

State of Ohio's Western Lake Erie Basin Collaboration Plan

By Ray Stewart



Western Basin of Lake Erie

maximizing habitat, water retention, sediment trapping and nutrient processing.

We know that wetlands are excellent filters and will remove phosphorus and other nutrients from the water that passes through them. When properly positioned and designed, they are very cost effective tools for water quality improvement. Then why are they only mentioned with regard to coastal wetlands? In their current state, Lake Erie's western basin coastal wetlands only weakly interact with the open waters of the lake. Most of these wetlands are highly engineered, diked and pumped. Most have only small streams and ditches that deliver water off of the mainland.

The governors of Ohio and Michigan, along with the premier of Ontario, are committed to the goal of reducing phosphorus load to Lake Erie by 40%. Doing so would improve water quality and greatly reduce the occurrence of harmful algal blooms in the lake. The draft Western Lake Erie Basin Collaborative Implementation Plan focuses on the watersheds in and around Toledo where the most egregious consequences of nutrient loading have seen.

In the 29-page draft plan, wetland restoration is mentioned twice. In one case, the Ohio Department of Natural Resources (ODNR) and the Ohio Environmental Protection Agency (OEPA) agree to fund design work for coastal wetland restoration projects that use dredged material. In the second, ODNR will coordinate to develop a tool to identify potentially restorable wetlands, with the goals of

They are designed largely for recreation and for waterfowl hunters. Water exchange only occurs to meet desired management objectives, often at considerable expense.

OWA contends that the emphasis should instead be directed toward wetland restoration along the main stems and tributaries of the Maumee, Sandusky and other river systems in Western Lake Erie. Restoration efforts should be used to restore wetlands that can filter nutrients out of the water before they reach Lake Erie. They can divert the natural flow of the rivers to passively meander across open marshes, wet prairie and forested wetlands on their way downstream. By beginning upstream, a more cost effect nutrient reduction plan can be achieved.

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Board Member to Promote Wetlands to Plant Enthusiasts

By Mark Dilley

OWA Director and Professional Wetland Scientist Mark Dilley will be sharing his love of wetlands and the plants that grow in them with participants at this year's Flora Quest. This Friday, September 30 event will be held in conjunction with the Ohio Ornithological Society's "Rally for Rails" Conference (October 1 and 2) in Lakeside, Ohio. The title of Mark's talk is "Wetland Plants: Twenty to Thrill, Five to Kill." He plans to deliver an entertaining but informative presentation that highlights the beauty, uniqueness and ecological value of select native wetland plant species, as well as the threats posed by five invasive species that degrade wetlands and diminish their habitat value.

As a preview, here are a few fun facts on two thrilling wetland plants:

Ditch Stonecrop (*Penthorum sedoides*) is an interesting, albeit easily overlooked, obligate wetland plant that has caused some consternation among the botanical professional ranks. According to the Illinois

Wildflowers website (administered by Dr. John Hilty) of the stonecrop family (Crassulaceae), "[s]ome authorities assign Ditch Stonecrop to the Stonecrop family (Crassulaceae) or Saxifrage family (Saxifragaceae). However, it can be considered sufficiently unique to be assigned to its own family, which also includes a few Asiatic species." The genus name combines the Greek words pente (five) and horos (mark), referring to the 5-parted pattern of the flower. The specific epithet (sedoides) means "sedum-like," referring to the similarity of this plant's flower to members of the genus *Sedum*. It is a perennial herbaceous plant that typically reaches a height between 6 and 28 inches. The alternate, lanceolate leaves, 2-4 inches in length are finely toothed and typically smooth. The flowers are by far this plant's most interesting feature: small, pale green to yellow green, usually without petals, up to one-quarter inch wide; in an airy branched terminal cluster up to 3 inches wide, with flowers held on upper side of the 2-4 curved branches. This plant can be found in flower in July through October on stream banks, in

ditches and in a variety of wetland types. Once in fruit, the plants oblong capsules begin to turn a showy pale red at maturity in radial clusters of 5. It is widespread across our home state, with records from 75 of our 88 counties. Surprisingly, for such a common plant, little is known about wildlife use of Ditch Stonecrop. Dr. Hilty remarks on his website that "[i]nformation about floral-faunal relationships

for this species is currently unavailable. More research needs to be done in this area."

The **Allegheny Monkey Flower** (*Mimulus ringens*) is an attractive member of the figwort family (Scrophulariaceae) and an obligate wetland plant. It occurs in roughly half of Ohio's counties in a very wide variety of floodplain and wetland habitats. Growing to a typical height of 24 inches, this plant tends to grow individually or in very small scattered patches, comingled with a variety of other wetland associates, like *Carex* sedges and grasses. Finding this plant in bloom is always a treat. It has beautiful light purple flowers (a



two-lipped corolla, approximately 1 inch long, with a cream-colored or yellowish center) that attract humans and pollinators alike. Bumblebees, in particular, nectar on the flowers. In addition, a variety of moth and butterfly caterpillars, including the Buckeye (*Junonia coenia*), feed on the serrated 4-inch-long, 1-inch-wide leaves that grow opposite one another along the plant's bluntly 4-angled stem. Again quoting the Illinois Wildflowers website, "The common name comes from the fancied resemblance of the flower to a monkey's face when it is squeezed by the fingers." *Mark cautions that it is the flower you should squeeze to spot the similarity, and not a monkey's face.*

In addition to the wetland plant primer, Mark will weave in some discussion of the importance of native wetland plants as habitat for rails - providing a nod to the conference, Rally for Rails, on Saturday and Sunday.

For more information on the conference and registration materials, go to <http://www.flora-quest.com/>.

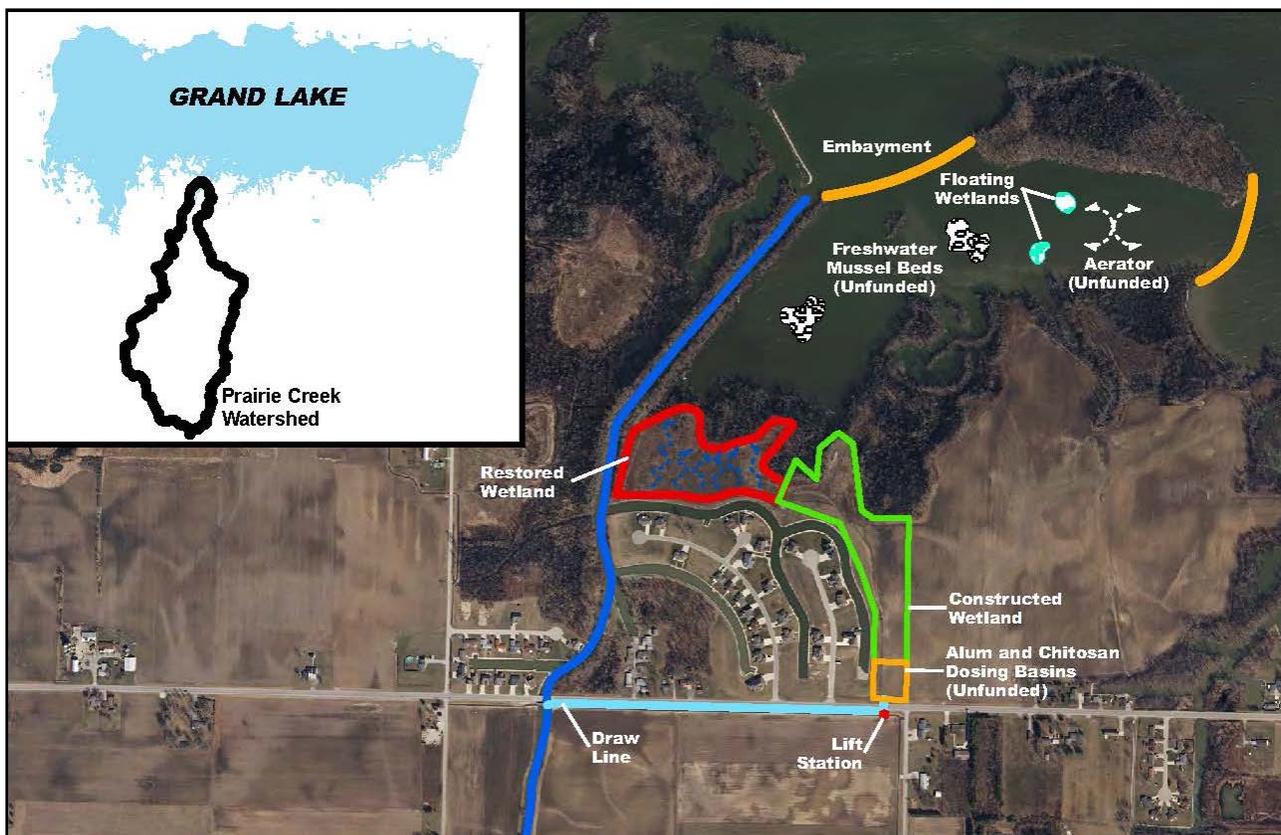
Treatment Train By Ray Stewart

According to an article by Celeste Baumgartner in the Ohio Outdoor News, Grand Lake St. Marys is on the "Comeback Trail." Grand Lake St. Marys became Ohio's most infamous lake in 2010, when a massive algal bloom formed with clouds of harmful microcystin, a toxic product of blue-green algae. Similar to the algal blooms on Lake Erie, it was caused by phosphorus-rich agricultural runoff. As also is true of the western basin of Lake Erie, the watershed that leads into the lake was once rich with wetlands, especially at the mouth of the various tributaries. In the past couple centuries, most of these wetlands had been converted to farms and residential and commercial development, exacerbating regional runoff issues.

In response to declining health of the lake, the Grand Lake Restoration Commission (GLRC) was formed, managed by Milt Miller. Having raised \$660,000 in the first year, consultants and think tanks were hired to find a solution. They concluded that restoring large

areas of wetland would help to filter water flowing into the lake and remove some of the nutrients that feed algae blooms. One of the first restoration projects accomplished was the Prairie Creek Treatment Train (PCTT), a living machine that included created (engineered), restored and existing natural wetland features to cleanse water from Prairie Creek. A 2013 report on the performance of the PCTT states that this wetland reduced nitrogen by 41%, total phosphorous by 75% and dissolved reactive phosphorous by 65%.

OWA has been promoting the concept of wetland restoration as a means of cleaning up bodies of water for many years. We know that it works to reduce sediment, remove nutrients, detoxify contaminants and reduce harmful bacteria like *E. coli*. The GLRC and its team of consultants and advisors also appear to value this approach to improving their water quality. We congratulate their success and wisdom to use the natural services of wetlands to help solve an urgent problem.





Ohio Wetlands Association

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Wetlands for a Better Ohio

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Ohio Wetlands Association

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