

Natural Areas Discovery Series wraps up this fall

If you haven't had a chance to attend any of the division's Natural Areas Discovery Series programs, you still have a chance to attend the September and October offerings. Staff has enjoyed meeting new faces, seeing old friends and introducing the best of Ohio's natural areas to visitors, both near and far.

Birding on Coastal Dunes

Headlands Dunes State Nature Preserve, Lake County

September 18 • 8 a.m. – 3 p.m.

As summer turns to autumn, experience one of Ohio's best coastal beach dune communities. Whether your interest is botanical or avian, there is plenty to see. Many rare plants grow on the sand dunes and a variety of shore birds can be seen resting along the beach. Headlands Dunes has recently been named an "important bird area" by the Ohio Audubon Society.

Begin your visit with an 8 a.m. bird hike, or learn more about coastal plants by joining one of two hikes (11 a.m. or 1 p.m.) focusing on the unique vegetation of the dunes.

Headlands Dunes is located west of Fairport Harbor at the north end of State Route 44 and extreme east end of Headlands Beach State Park. Parking and restrooms are available in the state park. For more information, contact (440) 632-3010.

The Colors of Autumn

Fowler Woods State Nature Preserve, Richland County
Johnson Woods State Nature Preserve, Wayne County

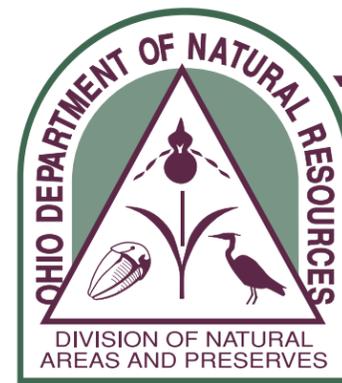
October 16
10 a.m. – 4 p.m.

Fowler Woods and Johnson Woods will both be hosting fall foliage events, giving you twice the opportunity to see the best in fall color. Guided, fall color hikes will begin at each site at 10 a.m., 12 p.m. and 2 p.m. Choose the woods you haven't seen yet, or see both beautiful woods on the same day. Both preserves offer boardwalk trails providing accessibility for a range of visitors.

Fowler Woods is located 6 miles northwest of Olivesburg on Olivesburg-Fitchville Road, just south of Noble Road. For more information, contact (419) 981-6319.

Johnson Woods is located about 4 miles north of Orrville off State Route 57, then travel one mile east on Fox Lake Road. Parking is available on the north side of the road. For more information, contact (419) 433-4919.

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DIVISION OF NATURAL AREAS AND PRESERVES

Natural Ohio

Bob Taft, Governor • Sam Speck, Director
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Strategies for Scenic River Protection Kokosing Watershed Plan

Thousands of years ago, the ancient mound builders settled in the Kokosing River valley. Those ancient people found, as do today's residents, that the valley and its watershed harbor fertile soils, abundant wildlife and a rich quality of life. The healthy wooded corridors maintained by landowners and erosion controls used by farmers combine to help the Kokosing State Scenic River retain exceptional water quality and species diversity.



Despite those measures, the Kokosing watershed is changing quickly. About 69 percent of the Kokosing watershed is located in Knox County. As Columbus suburbs continue to expand, threats to the Kokosing watershed have increased. Productive farmland is being subdivided for residential development, as more people move into the area.

According to 2000 census data, Knox County's population grew by more than 15 percent since 1990.

Mapping the future

Funded by an Ohio Environmental Protection Agency (EPA) 319 grant, the Division of Natural Areas and Preserves

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Ohio's Flying Tigers

Ohioans need not attend this year's summer Olympics to view impressive displays of athletic beauty—they need only watch the acrobatic skills of our very own tiger spiketail dragonfly.



Photo by Clark Shiffer - Ohio Historical Society

Dragonflies belong to the order of insects called Odonota, which means "the toothed ones." The tiger spiketail belongs to the family, *Corduligasteridae* and to the genus, *Cordulegaster*. Interestingly, only one genus of this family occurs in North America.

Listed as a species of concern by ODNR's Division of Wildlife, the tiger spiketail is known to occur in nine Ohio counties. The Ohio Natural Heritage Database has 23 records for this species, most from southeastern Ohio.

Dragonflies can easily be distinguished from other insects by the combination of four wings of equal length and tiny bristle-like antennae.

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PRESERVING NATURE TODAY FOR THE NEEDS OF TOMORROW

The Division of Natural Areas and Preserves' Mission Statement
Administer a system of nature preserves and scenic rivers by identifying and protecting Ohio's significant natural features.

Vision Statement
Leading Ohio in the stewardship of its natural heritage.

Visit our website at: www.ohiodnr.com/dnap



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Conservation Successes Abound in Kokosing Watershed

The Kokosing State Scenic River has only been a part of the state scenic rivers program for seven years, but the division and its local supporters have been actively participating in a number of conservation programs. Here are a few notable successes.

- In 2003, Kokosing Watershed partners were awarded a Clean Ohio Fund grant to protect high quality vernal pools and associated upland buffer threatened with development. More than \$1.5 million in Clean Ohio funds will protect these high quality habitats by enabling the partners to purchase important riparian conservation easements.

The wetlands serves as a research site for the Ohio Environmental Protection Agency and Kenyon College students. Also, the potentially threatened raven-foot sedge (*Carex cruscovii*) is extant on site.

- The Knox Soil and Water Conservation District (SWCD) and the division collaborated to provide livestock exclusion fencing to local farmers. In exchange for fencing, the farmers protect streambanks from livestock encroachment. Access areas to the stream are planned with technical assistance from Knox SWCD. More than 11,000 linear feet of stream was fenced during the initial phase of the project.

“This win-win program results in increased water quality, restoration of riparian habitat and allows farmers to continue using streams for livestock watering.”

Kim Baker, former Kokosing Scenic River coordinator

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worked with local government officials, organizations and citizens to develop a watershed plan for the river's future.

“I commend all the local officials and partners who took a proactive approach to developing a watershed plan for the Kokosing River, which will help the division protect the future of this state scenic river,” said Bob Gable, Ohio Scenic Rivers Program administrator.

The goal of developing a watershed plan is to identify and reduce nonpoint sources of pollution, and identify and protect high quality habitat areas. A plan will help guide the division and other governing entities regarding decisions and actions affecting the Kokosing River and its tributaries. The plan represents an analysis of environmental, recreational, socio-economical and historical factors related to activities in the watershed. It outlines strategies to restore, enhance and protect local natural resources.

In April, the Kokosing watershed plan received full endorsement by the Ohio EPA, becoming the first watershed plan in Ohio to meet all criteria in its initial review by the Ohio EPA.

“The Kokosing River plan will serve as a model for other watershed plans, said Gable. “More than 40 plans are under development in Ohio, but because of strong local support, the Kokosing watershed area will lead the way in watershed planning.”

Local support key to success

Protection and preservation of any of Ohio's designated scenic rivers depends heavily on local support and community involvement. The division formed a watershed plan steering committee representing a diverse group of local officials and advocacy members. Steering members included: Knox and Morrow County soil and water conservation districts; Kenyon College; The Philander Chase Corporation; Knox Farm Bureau; Knox Citizens for Smart Growth; Knox County Engineer; City of Mt. Vernon;

Knox Regional Planning Commission; Owl Creek Conservancy; Knox Health Department; and local farmers and developers. The Kokosing Scenic River Advisory Council also participated in the watershed planning process.

A remarkable natural resource jewel

Wooded corridors, extensive floodplains and rural landscape have helped maintain Kokosing's purity. The Kokosing River watershed supports a variety of plants and animals, including 44 species of mammals, 89 species of birds and 70 species of fish. The river is home to three endangered fish, as well as five rare Ohio plants. To learn more about this special river, see the Scenic River spotlight on page 4.

Maintaining quality of life

Family farming and the Kokosing have co-existed for centuries. Protecting the Kokosing is intrinsically linked to appropriately managing the existing land in the watershed.

Farms comprise more than 60 percent of Knox and Morrow counties. In a recent survey performed by the Knox County Regional Planning Commission, 90 percent of respondents agreed with protecting farms by managing growth. Farmland and green space protection maintains property values and quality of life for local residents.

Economic benefits of conservation

The Kokosing's streams and wetlands provide natural flood control, trap sediments, maintain water supplies, recycle nutrients, maintain biological diversity, recharge groundwater, provide wildlife habitat and afford people places to recreate. These ecosystem services help local governments reduce the costs of providing clean water and recreational areas to the public.

Wetlands adjacent to streams absorb significant amounts of rainwater and runoff before flooding and slow water down, which helps control erosion and sedimentation. Reservoirs and water treatment plants located in watersheds

with healthy streams and wetlands require less dredging and reduced treatment and filtration than watersheds with degraded streams and wetlands.

The watershed's future

Division staff used geographic information system (GIS) technology to map natural resource and environmental attributes, archaeological and historic sites information, and habitat impacts detected in the field. These details were analyzed to determine the best conservation, restoration and protection strategies.

The Kokosing watershed contains approximately 3.6 million linear feet of perennial and intermittent streams. About 30 percent of streams in the watershed exhibit some degree of impact, with the majority of impacts caused by riparian vegetation removal, range grazing, land development and stream channelization activities. With these impacts in mind, eco-management strategies, if employed, would restore or maintain ecosystem functions, quality of life and recreational opportunity in the watershed.

Strategies include livestock exclusion fencing in two sub-watersheds and protecting high quality riparian areas by purchasing land or conservation easements from willing landowners. Other notable strategies include: wetland and floodplain protection; wetland restoration; managing storm water; headwater stream identification; and increasing environmental education, awareness and outdoor recreation opportunities.

The Kokosing River, its watershed and its future looks bright, due in large measure to the support and assistance of the Knox County community. The division will be moving toward implementation of the Kokosing Watershed Plan, in partnership with local participants.

*Kim Baker
former Kokosing Scenic River Coordinator*

(Editor's note – Kim Baker, who did an excellent job coordinating the watershed planning project, has moved to another ODNR division. If you are interested in learning more about the Kokosing Watershed Plan, please contact Bob Gable at (614) 265-6453.) ✓

Invasive Plant Alert #14

Canada Thistle

Description: Canada thistle is a slender, herbaceous perennial plant reaching a height of 2-4 feet. The leaves are simple, alternate, irregularly lobed and taper toward the tip. The underside of the leaf is normally smooth with the margin bearing many sharp spines. Stems are grooved, hairy and branched at the top. The root system is comprised of a deep taproot that may extend 6 feet down and an extensive creeping rhizome, which other thistles in Ohio lack. Numerous fragrant, lavender-pink, 1-inch flowers adorn the plant from June to September. A single plant may produce more than 5,000 seeds, each of which is attached to a hair-like tuft making it easily dispersed by wind.

Habitat: A non-native plant, Canada thistle occurs in nearly every open, dry habitat within its range and tolerates nearly any soil type that is not waterlogged. In natural areas, it is a particular problem in old fields, prairies, savannas and early successional forests.

Distribution: Despite its name, Canada thistle is not native to Canada or even to North America. It is native to eastern and northern Europe and western Asia, and was introduced to North America in the 1600s. Found all over Ohio, it has spread throughout the United States, except the southeast.

Problem: Canada thistle's extensive root system enables it to out-compete and displace many native species, especially in

degraded prairies where native species are not well established. Spreading both by seed and rhizome, Canada thistle can create monocultures covering large areas. The wind-dispersed seeds may remain viable for 20 years or more, which enables it to spread quickly while making it difficult to eradicate.

Control: Prescribed burning, especially in spring, can be effective by reducing thistle density and allowing native species to compete for resources. Mowing and hand pulling is usually ineffective as the plant can easily regenerate. Spraying of systemic herbicides is another effective control method, with fall and spring being the best seasons to treat Canada thistle. ✓



Kokosing State Scenic River

Considered the jewel of Knox County, the Kokosing State Scenic River may be one of central Ohio's best-kept secrets. Whether you like to fish, canoe, birdwatch, bike, walk, run or just enjoy an afternoon drive, the Kokosing River valley is a destination that will satisfy your outdoor fancy.



In 1997, 47.5 miles of the Kokosing River, and its North Branch tributary, became Ohio's newest state scenic river. The Kokosing River was designated for its outstanding biological health, beautiful scenic qualities and the strong local support for its long-term protection. More than 70 species of fish, including the state endangered spotted darter and mountain brook lamprey, call the Kokosing River home. The Kokosing is also one of Ohio's premier smallmouth bass fishing destinations.

The Kokosing Gap Trail and Kokosing River canoe accesses offer a pleasant opportunity for outdoor enthusiasts to experience both the

rustic nature of the river corridor and the rural characteristics of the surrounding landscape.

The 14 miles of the Kokosing Gap Trail wind their way from Mt. Vernon to Danville, offering not only a glimpse of the Kokosing State Scenic River, but also the surrounding watershed. Its rural landscape, which covers extensive areas of farmland, pasture, wetlands and woodlots, can be seen from the trail and is vital to preserving the exceptional qualities of the Kokosing River. Located along the trail, Kenyon College's Brown Family Environmental Center is an excellent place to hike through woodlands, prairies or even wade in the stream. For maps and information about

the Kokosing Gap trail, visit www.kokosinggaptrail.org.

If visitors to the area want to see the view from the river itself, there are canoe accesses located near Mt. Vernon, Gambier, Howard, Millwood and the Kokosing's confluence with the Mohican River. Canoeing the Kokosing River is a pleasurable experience.

Visit enough times and you'll view beaver, mink, deer, bald eagles, osprey and many others of the 89 species of birds breeding in the Kokosing River corridor.

The Kokosing River's clarity in summer offers a different kind of viewing experience. Whether you are canoeing, or watching from the bank or a bridge, you will be able to watch large schools of redhorse suckers swimming. There are few streams in the state where you are able to see fish in such abundance, swimming in their natural habitat.

The Kokosing State Scenic River watershed is truly a must visit destination for nature lovers. To learn more about this scenic river, visit our web site at www.ohiodnr.com/dnap. ✓

*Tim Peterkoski
Central Ohio Scenic Rivers Manager*

Celebrating 50 Years of Conservation

It was originally designated as Tree Farm No. 370 by the American Tree Farm System and the property served as the first automobile access road to Cedar Point. In 1954 it earned the name Sheldon's Folly after Dr. Dean E. Sheldon of Sandusky purchased the 54-acre tract.

Fifty years later, because of the foresight of Dr. Sheldon, the original 54 acres along with an additional 418 acres is protected within Sheldon Marsh State Nature Preserve.

On September 18, in cooperation with the Division of Natural Areas and Preserves, the Firelands Audubon Society and Friends of Sheldon Marsh will be hosting a day-long anniversary celebration at Sheldon Marsh. Planned activities include hikes and an evening banquet at the new Cedar Point Center at Firelands College.

Dr. Sheldon's protected "folly" today encompasses one of the last remaining sites where coastal beach turns to marsh. The landscape provides critical habitat for an abundance of wetland plants and animals. The preserve also

offers some of the finest birdwatching opportunities in the Lake Erie watershed.

Not only did the family protect and enhance their land, they made it available to others. Throughout the years, Sheldon's Folly attracted birders and naturalists from around the state.

Over the years, the site has hosted field trips, workshops and a variety of youth group activities, as well as serving as the outdoor home for the Firelands Audubon Society.

To reserve your place at the Folly@50 evening dinner program, please send \$25 per person to Friends of Sheldon Marsh, c/o Diane McNutt, 3928 Hilltop Drive, Huron, OH 44839 before September 10. To learn more, please call (419) 433-2132. ✓



Bluebirds find new nests at Lake Erie preserve

Josh Amstutz, a member of Boy Scout Troop #236 in Berlin Heights, recently completed his Eagle Scout project, which included constructing bluebird nesting boxes and creating a nesting trail at Old Woman Creek State Nature Preserve. Josh researched bluebird box designs, led a carpentry team and monitored the boxes during the nesting season. Pictured left to right, Matt Lux, David Whitacre and Project Leader Josh Amstutz. ✓

Special habitats protected in new nature preserves

An old-growth woodlot in Athens County and a hemlock swamp in Ashtabula County are the latest areas to receive permanent protection through Ohio's state nature preserve system.

Deeply forested habitat

Located outside the city of Athens, nearly 106 acres of undeveloped land supporting one of the largest, least disturbed old growth forest remnants in the state, became the Dale and Jackie Riddle State Nature Preserve last fall.

A portion of the preserve is locally known as Hawk Woods. The dense canopy of trees include massive tulip poplar and oaks, some as large as 30 inches in diameter. An oak-hickory forest can be found on the upper slopes of the younger, southern section of the preserve.

The preserve was sold to the city of Athens for less than the appraised value by Riddle Forest Products. The preserve stands as a memorial to the late founder of the company, Dale Riddle and his wife, Jackie.

Riddle State Nature Preserve runs up a ridge and faces north/northwest. A small intermittent stream is present and the area is home to an explosion of greenery—ferns, fungus and in the spring, a variety of wildflowers including showy orchis, jack-in-the-pulpit and trilliums.



The wooded preserve provides excellent habitat for birds which depend on mature forests, such as the worm-eating warbler and Louisiana water thrush. The forest supports good populations of breeding ovenbirds, wood thrushes, red-eyed vireos, Acadian flycatchers and eastern wood pewees.

Although the preserve is open to the public for visitation, currently it is an undeveloped site without any trail system. For more information, please contact the city of Athens at (740) 592-3325.

Rare plant community

In Ohio, the rare hemlock hardwood swamp community only occurs in Ashtabula County, mostly on the Lake Erie coastal plain or in the Grand River lowlands. Now 55 acres of this unique habitat is protected as Conneaut Swamp State Nature Preserve. The preserve is part of the 86-acre Conneaut State Wildlife Area.

The hemlock swamp contains a diverse mix of trees including hemlock, yellow birch, beech, tulip poplar, sycamore, cucumber magnolia and a variety of oaks and maples. Beneath the canopy lies a mix of sedges, grasses and wildflowers.

Although Conneaut Swamp State Wildlife Area, and the state nature preserve it encompasses is open to the public, activities are limited because of the site's proximity to the Lake Erie Correctional Institution. To learn more about Conneaut Swamp, please contact the Ohio Division of Wildlife at (330) 644-2293. ✓

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The tiger spiketail (*Cordulegaster erronea*) is unique, even by dragonfly standards. It is large and has prominent black, yellow and greenish markings, somewhat resembling the patterns of a tiger. This dragonfly's eyes are predominantly black, different from other species which have yellow in that area. The females have a spike-like ovipositor, hence the name spiketail, which they use by hovering over shallow water and driving it vertically into the bottom of a stream, like a moving sewing machine needle.

Dragonflies, beautiful in coloration and agile in flight, can easily be likened to the gymnasts of the sports world. Although not the fastest of insects, dragonflies are equipped with two

pairs of free wings. The synthorax, a fusion of the second and third segments of the thorax, is tipped rearward dorsally, so that the wings are displaced rearward, relative to the legs.

Just as elite athletes are few and far between, so are tiger spiketails. There are several theories about why this species is uncommon, but habitat destruction is one of the more obvious and preventable factors. Few human activities actually benefit dragonflies. Because the tiger spiketail is a stream dweller and because of its very narrow ecological parameters—small, spring-fed streams, soft sand deposits and mature wooded buffers—they have suffered more than their brethren from human activities. Various forms of water pollution have also taken their toll.

Blackhand Gorge State Preserve in Licking County, which is known for its beautiful outcroppings of Black Hand sandstone along the scenic Licking River, is home to the tiger spiketail dragonfly. They are found primarily within the sand substrates of the forested seeps and spring-fed, sloping banks of the preserve.

Specific natural areas, similar to that of Blackhand Gorge, will continue to provide important habitat for the tiger spiketail. Fortunately, sanctuaries of just a few acres may be enough to protect a population of rare dragonflies. For more information on finding Blackhand Gorge, visit www.ohiodnr.com/dnap.

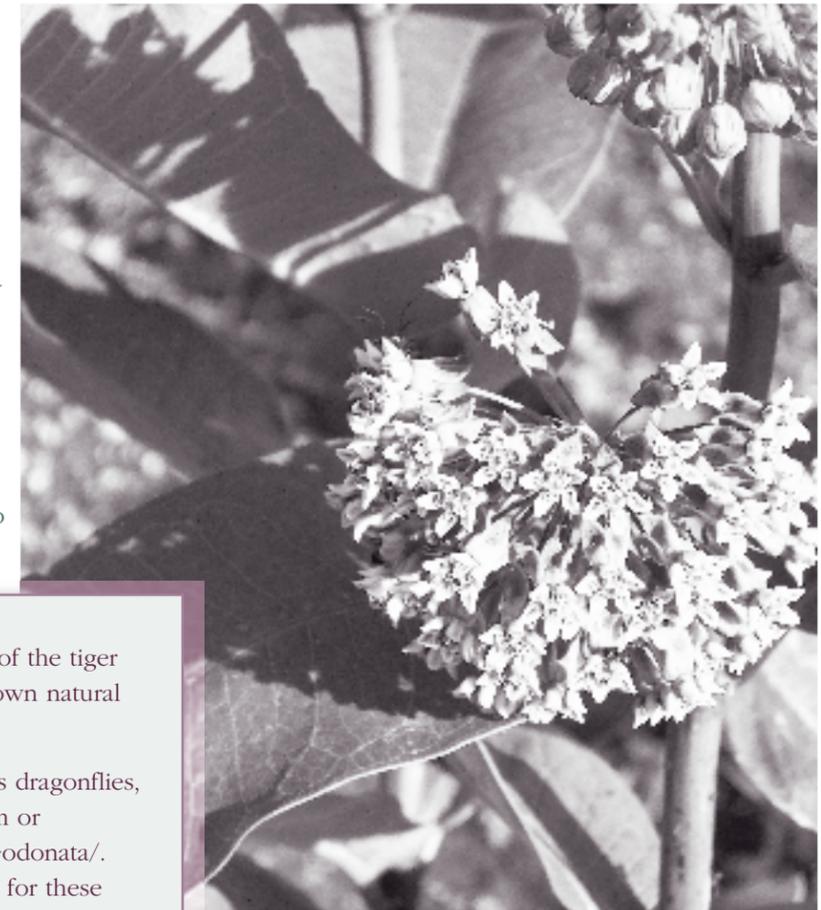
While you won't see routines set to music or medals awarded, you'll still

The Impressive Milkweed

Milkweed is a child's plant. What youngster has not watched its parachuted seeds drift into the unknown or gathered its empty pods for autumn decorations or marveled at the white sap that appears when the plant is broken?

The common milkweed (*Asclepias syriaca*) is one of the most familiar plants of the Midwest. Originally found in prairies and other dry, sunny places, milkweed now thrives in old fields, along roads and even in empty city lots. So aggressive has it proven to be that it is often considered a weed—one of the few native plants to earn that dubious distinction.

Part of milkweed's success is due to the amazing adaptations of its seeds. Those familiar parachutes contain as many as 900 individual silky, hollow hairs, each one coated with a water-resistant wax. Once caught by the wind, a seed can sail for miles before drifting back to earth. Should it happen to land in water, the seed is kept afloat by a corky rim until it drifts to shore.



alone. New plants sprout at intervals along the rootstock, which is why milkweeds are most often found in clumps. Each colony is actually a single plant, all the visible stems growing from the same root.

The milkweed flower is a marvel of natural engineering. Each pale purple flower of the domed cluster consists of a central platform surrounded by five hood-shaped cups. The cups are filled

with nectar which attracts bees. As the bee struggles to gain a foothold on the slippery flower, one of its feet slips into a slit in the base of the flower between the two cups. When the bee is ready to move on, it finds its leg trapped by the flower. When it pulls its leg free, the trap comes along, carrying two pollen sacs with it. At the next flower, the bee leaves the pollen sacs behind, unwittingly cross-pollinating the plants. Although the method seems well-organized, there is so much serendipity involved that only a few flowers in each cluster will be fertilized.

Common milkweed, found in every Ohio county, is not Ohio's only native representative of the genus, although it is one of the most widespread. Ohio actually has 13 species of milkweed ranging from the common swamp milkweed whose pinkish-purple flowers grace wetlands to the vibrant, orange butterfly-weed of drier grounds and gardens. All share the unique flower structure of the common variety.

In the past, milkweed has been found useful medicinally, which accounts for its scientific genus name, *Asclepias*, from the Roman god of medicine Aesculapius. Young shoots, leaves, pods and flower buds are edible, although several changes of water may be needed to remove the bitterness.

During World War II, an attempt was made to use the latex found in milkweed's sap as a rubber substitute, but it could not be obtained in

sufficient quantity. Gathering its silky seed parachutes to use in place of unobtainable kapok for life preservers was more successful.

All of which goes to show that even a plant as underrated as common milkweed has many things to offer, if we just give it a chance. ✓

Tim Snyder
West Central District Preserve Manager

Melissa Campbell
Eco-analyst
Natural Heritage Program