

***SEEDLINGS, the Newsletter
of Kalamazoo Area WILD ONES,
Native Plants, Natural Landscapes***

CONTENTS—March-April, 2011

§ March Wild Ones program features **Michele Richards**, Natural Resources Specialist at Ft. Custer Training Center, speaking about her long experience in restoring natural ecosystems on disturbed land.

§ First Field Trip of the Season: **Spring Wildflowers** with **Richard Brewer**, Saturday, April 30.

§ **Meet Our Members:** A new regular feature in *Seedlings*. This issue, meet Judy Packard.

§ **A Call to Join the Community**, by Paul Olexia.

§ **Good News!** *Michigan Flora* is online.

§ **Bad News.** Climate change will reroute the evolution of plant-insect relationships.

§ **Interesting News.** It's more or less official! We've entered a New Epoch, geologically and in just about every other way.

§ Sightings and Insights.

§ Memorable quotations.

***Michele Richards Speaks March 23 on Challenges of
Restoring Natural Communities on Disturbed Land at Ft.
Custer Military Training Center***

[Here's Michele's description of her program for Wild Ones]

Ft. Custer Training Center encompasses 7,500 acres of land that 85 years ago was almost completely farmed. The snippets of remnant high quality natural areas that mostly remained undisturbed were all very steep slopes or very wet lands. Once in the hands of the military, however, the land began to heal itself, and at least some of its previous inhabitants returned. Fast forward to today, and what we see are snippets, B-grade at highest, of high-quality natural communities.

My job over the last seven years has centered on restoring those snippets, and planning the work that will help those core habitats to expand into the surrounding lands that are highly degraded. I have used invasive species management, native seed propagation and prescribed fire as the primary tools in the toolbox of restoration. It hasn't been a steady climb toward a desired state, but rather a jagged line of ups and downs on the success scale. For this program I'll cover FCTC's history (briefly), the tools and timing I've used in the restoration work, and the issues I've run into as the restoration work continues.

[Michele's program will be followed by a field trip to Ft. Custer on Saturday, Aug. 20, led jointly by Michele and Wild Ones member Tyler Bassett, who has done an extensive natural features inventory at Ft. Custer. Since we'll be going onto a military reservation, pre-registration for this trip will be required. Details in later issues of *Seedlings*.]

Michele Richards has immersed herself in the ecological restoration of Ft. Custer Training Center as a Natural Resources Specialist for almost eight years. For this and many other efforts at the Fort, she and her coworkers have received top honors through the Department of Defense and the State of Michigan over the years. Currently Michele serves as the Chair of the Michigan Prescribed Fire Council, and works with and for a broad range of environmental organizations furthering various causes.

She serves on the Environmental Concerns Committee for the City of Kalamazoo. She has a BS in Earth Science and Environmental Studies from WMU, as well as a deeply satisfying job raising two lovely daughters.

We'll meet at Christian Church (Disciples of Christ), 2208 Winchell, Wednesday, March 23. Socializing at 6:30. **Program promptly at 7 p.m.**, announcements, discussion, and more socializing following.

+++++

***After Long Winter, Richard Brewer Leads Wild Ones
on April Field Trip to View Spring Wildflowers***

Mark it on your calendars; store it in your memory, or wherever you keep what you want to remember: Saturday, April 30, 10 a.m. to 1 p.m. Richard Brewer will once again lead us on a field trip to celebrate the return of warm days and wildflowers, the lovely, fragile spring ephemerals of the woods and

the woodland openings. We'll travel to Richard's own property near Kalamazoo. Here are the details:

BREWER'S WOODS: 40 acres of rich beech-maple forest, grading into wet-mesic forest. Located in an outlier of the largest of the four patches of beech-maple forest in Kalamazoo County(southeast corner) which was also the last part of the county settled. We'll see the common and some uncommon herbs and shrubs of mesophytic forest. Most will be in bloom, some just beginning, and some just finishing up. Discussion will center on interactions in this complex ecosystem.

CAR POOL from the Pavilion Township Hall Parking Lot at the corner of 29th St. and East Q Ave. Park in the northwest corner of the lot. For most people coming from the Kalamazoo area, the most satisfactory route will be one that takes you to East Kilgore (which is also East N Ave), then east to 29th St, then south on 29th to Q Ave. The Township Office is in the southeast corner of the intersection. We'll need to take no more than five cars to the field trip site.

TIME: We'll leave parking lot at 10 AM, five-minute drive. We'll finish a little past noon. Bring a lunch if you wish to continue our conversation.

Emeritus Professor of Biology at WMU, Richard is co-author of the *Atlas of Breeding Birds of Michigan*, author of two widely used textbooks, *Principles of Ecology* and *The Science of Ecology*. His most recent book is *Conservancy: the Land Trust Movement in America*. He's one of the founders of the Southwest Michigan Land Conservancy and has played an important role in the founding and life of the Kalamazoo Chapter of Wild Ones.

Please join one of the area's most knowledgeable and most popular field-trip leaders for a wonderful walk to enjoy spring wildflowers and learn more about the ecosystem that provides them.

+++++

***“Meet Our Members,” A New Series of Interviews
with Wild Ones: Meet Our New V-P, Judy Packard***

by Dave Wendling

At our last Publicity, Publications, and Outreach (PPO) Committee meeting we decided to start a new column in *Seedlings*, about our members, and I agreed to interview some of our members so that we can all get to know them better. I'll

appreciate any suggestions you have for me or the PPO Committee regarding this column.

My first interview is with **Judy Packard**, who moved to this area in 2008 and quickly became involved with Kalamazoo Area Wild Ones. Judy is now our Vice President and is chairing our PPO Committee. She is also an Environmental Educator at the Kalamazoo Nature Center. Since she's new to us all, I thought it appropriate to interview her first for this column.

Q. Judy, can you tell me a little about your background?

A. I was born and raised in Wind Lake, Wisconsin, near Milwaukee. I received a B.S. in home economics and had an early career in retail management. I moved to Bay City, Michigan, in 1979, to marry my husband and lived there until 2008 when he passed away. I now live in the Kalamazoo area to be with my son and his family, including my three grandchildren.

Q. Besides raising your family, what did you do in Bay City?

A. I was an Environmental Educator at Chippewa Nature Center in Midland for 18 years. I was also the founder and the first president of the Mid-Mitten Wild Ones Chapter in Midland.

Q. How did you become interested in nature, particularly native plants?

A. Growing up in the country by a lake was probably what gave me a love of nature. I loved being outdoors in our little woods, by the shore of the lake, or fishing on the lake with my dad. I also spent many hours with my mother, tending the vegetable garden or enjoying the flower gardens with all the critters. I had been taking my young son to the programs at Chippewa when I realized that teaching people about my love of nature was my passion. As I learned more about natural history, the importance of native plants became very evident to me. Even though kids love furry animals and creepy, crawling critters, I've tried to incorporate the importance of plants into all the programming I do.

Q. How did you find out about Wild Ones and when did you become a member?

A. One of my responsibilities at Chippewa was to coordinate an event called Green Gardening Day on Earth Day. In my search for exhibitors I found the web site for the Flint Chapter and eventually attended their meeting. I decided that Midland needed to form a chapter, so I did that with the help of others at the nature center.

Q. Tell me about one of your favorite native plants.

A. This is a difficult question because I love so many for different reasons, but the common milkweed is such an amazing plant. It provides food and shelter to so many

different species, not only the monarch. I've even taught a program on this wonderful "weed" and all its dependents: beetles, bugs, ants, aphids, spiders, and butterflies. It's a true example of biodiversity on one species.

Q. What sort of property do you have, and what are your plans for it?

A. My property is 1.25 acres with a small wooded area and open areas. The woods are predominately mature oaks, black cherry, and pines. I'm eradicating invasives including ivy, myrtle, autumn olive, and honeysuckle. I am maintaining about a third of the yard in lawn for my grandkids to play ball, and also for my vegetable garden. The rest will be the already wooded area, small prairie plantings, and rain gardens. I left my last home after 30 years of gardening, and now I'm starting over. I'm delighted that Kalamazoo has such a wonderful nature center and strong chapter of Wild Ones. That helps a lot to make me feel at home here.

+++++

***ANOTHER FRIENDLY, URGENT INVITATION
TO JOIN WILD ONES IN COMMUNITY PLANTING
PROJECTS***

By Paul Olexia

Among the important activities of Kalamazoo Area Wild Ones, our planting projects around the community rank very high. Our objectives include providing better resources for wildlife in degraded public spaces, helping to improve water quality in some of the city's wetlands, and making the beauty of native plants visible in areas frequented by many people.

As we begin to look toward the next growing season, there are potentially quite a few projects we could be involved in. But because of a generally small number of volunteers, we've had to be selective in our plans and commitments. We hope that will change in 2011, and we invite you to come, learn about some new plants, and help us in our efforts to educate the public and restore some of the native diversity to this region, so reduced and degraded by urban development and conventional landscaping.

One of the projects we've maintained in the past is a plot of native plants in Crane Park (near the top of Westnedge hill). But now, because of a new master plan by the Kalamazoo Parks and Recreation Department, calling for more traditional garden beds, we'll have to rescue as many of these plants as possible. Then we'll have to find new homes for them. Some may be available at the spring plant exchange, while others may be moved to different project sites. We probably won't

have much time to remove our plants once the weather begins to improve, so it would be good to have as many hands to help with this rescue as possible.

We'll continue to maintain and, if possible, expand the excellent plantings we have along Axtell Creek, especially at the two major plantings, near the law offices at Crosstown and Howard Streets and downstream near Paris Cleaners (just west of S. Westnedge). These are some of the most successful projects we've undertaken. The wetland planting near Howard St. is threatened by invasive cattails, and we have to keep removing invasive reed canary grass at the Paris Cleaners site. In addition, we've been keeping up a constant battle with purple loosestrife all along the creek. We hope to get some of the beetles that feed on purple loosestrife to help us control the proliferation of this invasive. But mostly we hope to get **more volunteers** to help us control invasives, beautify public areas, and educate the general public. Those of you who were able to attend our February meeting may recall the valuable ecosystem services provided by healthy (and biologically diverse) wetland communities.

We'll be cooperating as best we can with the People's Food Co-op, which will be installing native plantings and rain gardens at their new store on Harrison Street. How involved we can be will depend in part on how much volunteer assistance we can generate among our membership.

One on-going project which has been a challenge at times is maintaining a planting in one of the courtyards at the Maple Street School. We've received virtually no assistance or interest from the school in maintaining the garden or using it for educational purposes, and we're considering the possibility of removing plants that we've put in there.

We've been approached about the possibility of collaboration with other organizations and with some local businesses and schools. How much we can take on remains to be seen. But the possibilities are there, and it's clear that the Community Projects volunteers will have their hands full, and then some.

We believe strongly that a major way in which we can impact this community is through our various plantings in places that show off the beauty of native plants and inform the public of their importance. We need as much help as we can get in achieving that objective. Please consider coming to work-days this spring and summer—as many as you can. Don't stop there: help recruit friends, neighbors, and other members to assist us. Make these true *community* projects.

We'll be announcing planning meetings and work sessions in future newsletters and in special announcements—please watch for them. Let us know of your interest and what times and days you could be available. We need more regular volunteers whom we can depend on, but even a couple of hours of help every month or two is very valuable. We normally work for only 2-3 hours each time we meet.

We should warn you. Although we work pretty hard, we have fun and we learn, and it can be habit-forming.

+++++

GOOD NEWS! Edward Voss's MICHIGAN FLORA, Revised and Updated, Now Available Online

Most of us know, love, and depend on Edward Voss's invaluable classic, *Michigan Flora*, published in three volumes between 1972 and 1996. **Now, a revised and updated version is available online.**

Once you get the hang of it, browsing and searching is easy: <http://michiganflora.net/home.aspx>. In addition to virtually all the information included in the published *Michigan Flora*, the online version includes the spore-bearing vascular plants (ferns, horsetails, club mosses, etc), taxonomic and nomenclatural changes, the coefficient of conservatism, the coefficient of wetness, and the wetness index. There are photos in most cases (with more to come)—but **not** the very helpful drawings from *Michigan Flora*.

It does help to know what you're looking for, and to know either the full scientific name, the genus, or some alternate common names: e.g., a search for "rattlesnake master" yields no result, but "rattlesnake-master" gets you what you want.

You won't want to toss your well-thumbed hard-copy volumes; they include introductory material, drawings, and personal observations that make the online version seem a little flat. Besides, they're old friends, and it's hard to curl up on the sofa with a computer screen.

Reznicek, A. A., E. G. Voss, and B. S. Walters. *Michigan Flora Online*. University of Michigan. Web. 2-14-2011. <http://michiganflora.net/home.aspx>.

+++++

BAD NEWS! Climate Change May Reroute Evolution and Change Plant-Insect Relationships

Rising carbon dioxide levels associated with global warming may affect interactions between plants and the insects that eat them, altering the course of plant evolution, research at the Univ. of Michigan suggests.

The research focused on the effects of elevated carbon dioxide on common milkweed, *Asclepias syriaca*. Milkweed is one of many plants that produce toxic or bitter chemical compounds to protect themselves from being eaten by insects. These

chemical defenses are the result of a long history of interactions between the plants and insects such as monarch caterpillars that feed on them.

Plant defenses—and insect eating patterns—also respond to environmental factors such as rising carbon dioxide. This suggests that elevated carbon dioxide could affect plant evolution by altering the "selection pressure" that plant-eating insects exert on plants.

<http://www.rdmag.com/News/2011/02/Environment-Global-Warming-Global-Warming-May-Reroute-Evolution/>

+++++

***Interesting News (Hmmm)--
Are We Living in an Entirely New EPOCH?***

The British Royal Society, the oldest scientific society and one of the most prestigious, in the January 13, 2011, issue of the *Philosophical Transactions of The Royal Society*, carried an editorial and numerous articles on the theme, “Four degrees and beyond: the potential for a global temperature increase of four degrees and its implications.” One of the lead articles, “Beyond ‘dangerous’ climate change: emission scenarios for a new world,” challenges us to consider ourselves as living in a “new world,” an entirely different era.

Now the March 13 issue of *Transactions* presents scientific papers on the theme, “The Anthropocene: a new epoch of geological time?” The introductory article, by four eminent British earth scientists, develops the following thesis: “Anthropogenic changes to the Earth’s climate, land, oceans and biosphere are now so great and so rapid that the concept of a new geological epoch defined by the action of humans, the Anthropocene, is widely and seriously debated. Questions of the scale, magnitude and significance of this environmental change, particularly in the context of the Earth’s geological history, provide the basis for this Theme Issue. The Anthropocene, on current evidence, seems to show global change consistent with the suggestion that an epoch-scale boundary has been crossed within the last two centuries.”

Another article, on “Anthropogenic transformation of the terrestrial biosphere,” concludes that “At present, even were human populations to decline substantially or use of land become far more efficient, the current global extent, duration, type and intensity of human transformation of ecosystems have already irreversibly altered the terrestrial biosphere at levels sufficient to leave an unambiguous geological record differing substantially from that of the Holocene or any prior epoch. It remains to be seen whether the anthropogenic biosphere will be sustained and continue to evolve.”

And another article, on “Anthropogenic modification of the oceans,” concludes that

“As anthropogenic CO₂ permeates into the ocean, it is making sea water more acidic, to the detriment of surface corals and probably many other calcifiers. Once acidification reaches the deep ocean, it will become more corrosive to CaCO₃, leading to a considerable reduction in the amount of CaCO₃ accumulating on the deep seafloor. There will be a several thousand-year-long interruption to CaCO₃ sedimentation at many points on the seafloor. A curious feedback in the ocean, carbonate compensation, makes it more likely that global warming and sea-level rise will continue for many millennia after CO₂ emissions cease.”

In the January article, “Beyond ‘dangerous’ climate change: emission scenarios for a new world,” by Kevin Anderson and Alice Bows, the authors state that their analysis of emissions data and projections suggests

“that despite high-level statements to the contrary, there is now little to no chance of maintaining the global mean surface temperature at or below 2°C. Moreover, the impacts associated with 2°C have been revised upwards, sufficiently so that 2°C now more appropriately represents the threshold between ‘dangerous’ and ‘extremely dangerous’ climate change.”

The Royal Society’s view, overall, seems to be that we have in fact entered into, and are far along in, an entirely new age—and a very dangerous one.

Should you be interested in following up on some of these views, you could start with the March 13 issue:

<http://rsta.royalsocietypublishing.org/content/369/1938.toc>

To follow up with the Jan. 13 issue, go to

<http://rsta.royalsocietypublishing.org/content/369/1934.toc>

+++++

SIGHTINGS and INSIGHTS

Signs of Spring: Three Haikus

Almost overnight
Silence to cacophony
Redwings have arrived

Falling asleep to
Chorus frogs and spring peepers

Winter's hold is gone

Two titmice twitter
Twirl, whirl downward, tempers fly
Stop just above ground

--Ilse Gebhard

Rattle and Shake Before Opening

Towards the end of some stormy days in late January, I was sitting at the computer, not getting much done. I looked out the window and saw, for the first time, birds eating the seeds of American bladdernut. There was a chickadee shaking a dry, papery seedpod (about the size of the bird's head) of the bladdernut shrub (*Staphylea trifolia*) outside the study window. He shook it violently back and forth, he dropped it in the snow, he pecked at it, he picked it up and flew back up on the branch, and he shook it again—and again. Finally, he got it open, held it with his foot, and ate the seeds. By then, a cardinal had joined him, first merely observing, but soon beginning some shaking of his own, much more quickly successful. Neither bird seemed to mind that Gary Hightshoe rates the “wildlife value” of bladdernut as “low” or that it's way down, number 148, on Tallamy's list of woody host plants. Perhaps they both enjoyed playing with these Japanese-lantern-shaped “rattles,” just as Indian children are said to have done with bunches of dried bladdernut seedpods. At any rate, after two very wintry days of vigorous rattling and shaking, every single bladdernut pod was gone from the shrub. —Tom Small

+++++

Memorable Quotations

Our parks and lawns of sprayed Kentucky bluegrass might as well be Astroturf, except that Astroturf would be safer for the groundwater—and use a lot less of it.

--Robert Michael Pyle, *The Thunder Tree: Lessons from the Urban Wilderness*

Although skillful work may help, all healing ultimately depends on the self-renewing powers of nature. Our task is to understand and cooperate with those powers as fully as we can.

--Scott Russell Sanders, *A Conservationist Manifesto*

+++++

SEEDLINGS is edited by Tom Small and appears five times a year. The next regular issue, for May-June, 2011, will come early in May; **deadline for submission is Saturday, April 30**. Please send submissions, comments, and suggestions to Tom at yard2prairy@gmail.com.