

# STATION TO STATION

... from our home to yours

SPRING & SUMMER 2011

Dear Friends,

We are preparing for another exciting and busy spring and summer at KBS. This will be my 24th spring as a faculty member at KBS, but my first (and last) as Acting Director. Kay Gross will be returning from her sabbatical leave and taking up the reins once again in May. Despite difficult economic challenges, KBS continues to develop excellent new programs. We are able to do this because of the quality and quantity of work being done by our outstanding staff and faculty, and because of the support we receive from a variety of institutions, partners and friends like you. Please come take advantage of the opportunities we are creating for you.



The Kellogg Bird Sanctuary will offer **Summer Science Camp, Wild Wednesdays** and **Birds and Beans** again this spring and summer. New to the Sanctuary is the **Jr. Audubon Club**. The club meets year-round for family fun.

Maple Syrup season at Kellogg Forest produced more than 120 gallons of syrup. Stop by the Forest or Bird Sanctuary to purchase this "taste of spring".

Kellogg Manor House has several teas, brunches and open houses planned for the year. The Manor once again will host the Cereal City Concert Band for **Jazz in the Gardens**. Be sure to mark your calendar and plan to attend one of these special events!

We look forward to seeing you here at KBS this spring and summer.

Tom Getty, KBS Acting Director and MSU Professor

## This Summer at KBS

Students from across the U.S. will travel to KBS to take summer courses. KBS summer courses provide students with an opportunity for hands-on field and research experience that addresses applied and theoretical concepts in ecology and evolutionary biology.

KBS will also host 150 incoming MSU freshman during SpartaNature, a program that helps students make the transition from high school to college-level course work.

Twenty students (two from Purpan Institute in France!) will work on independent research projects, with faculty supervision, in KBS's Research Opportunities for Undergraduates (REU) program.

An additional 6 students will intern at the Bird Sanctuary, Dairy, and Manor House. KBS will offer a new cooperative landscape architecture internship partnering with Gull Landscape Company (GLLC). This intern will learn about commercial landscaping and work to help maintain the KBS Manor House Gardens.



## "The Roost" Opens at Kellogg Bird Sanctuary



Next time you visit the Kellogg Bird Sanctuary, take time to step inside The Roost, located in the Bookstore. In The Roost, visitors can watch birds at feeders, listen to their calls, check recent sightings on a computer kiosk and borrow binoculars and field guides prior to a walk around the grounds.

A microphone placed outside next to the feeders pipes bird calls and songs indoors. The Roost is home to an eBird Trail Tracker – this computer kiosk designed by Cornell Lab of Ornithology features a touch screen and interactive map of the Sanctuary. Visitors can enter bird sightings on the kiosk, complete with pins on the map to show locations. Bird Sanctuary interns complete a weekly site survey, so sighting data is current.

The Trail Tracker also has an interactive field guide that includes bird pictures, range maps and songs. To keep track of recent bird sightings at the Sanctuary, go to <http://bit.ly/birdsatkelloggbirdsantuary>.

The Roost was created with funds from Michigan State University and generous donations from Josh Haas, Glances at Nature Photography and Mark Rizzolo, The Sign Center.

## Agroecology Helps Develop Nutritious Options for Farmers in Africa

Dr. Sieg Snapp has recently completed a 10-year farming practices study in Malawi, Africa with a goal to develop more resilient and nutritious food production methods. Dr. Snapp, a soil ecologist based at the MSU Kellogg Biological Station, led the study, working in partnership with university faculty and students and Malawi farmers.

Results showed that replacing single-crop corn fields with a diverse blend of shrubby crops (pigeonpea), soybean and peanut helps increase yields and improve the soil quality.

The one-crop system relies heavily on fertilizer and is vulnerable to climate change. A blend of shrubby crops reduces erosion and returns nutrients to the soil, decreasing fertilizer use. Malawi farmers like the shrubby crops as they can harvest food during the dry season.

Snapp said the new practice of growing a greater diversity of crops in Malawi has already improved childhood nutrition in some parts of the country. For more information about Dr. Sieg Snapp and her research, visit <http://kbs.msu.edu/people/faculty/snapp>.



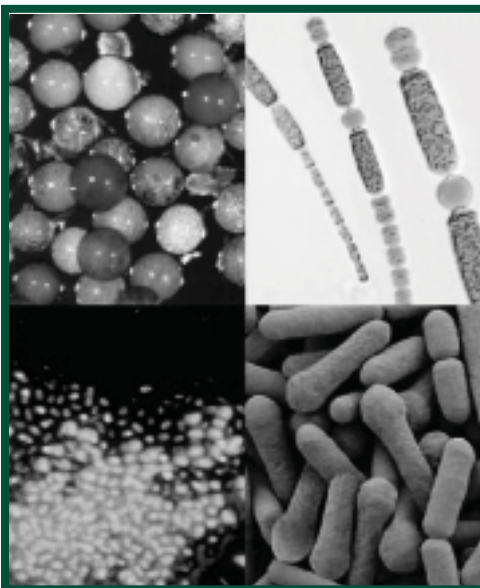
Dr. Sieg Snapp (center) With Colleagues.

## Undead Influence Climate Change and Biodiversity

Microbes have an additional option to living or dying – dormancy. Jay Lennon, Michigan State University Assistant Professor of microbiology and molecular genetics, examines the cellular mechanisms that allow microbes to hibernate and addresses their implications on larger ecosystems, such as soils, oceans, lakes and the human body.

Dormancy is a reversible state of metabolic activity that organisms enter when they encounter hard times, such as freezing temperatures or starvation. This is similar to the hibernation state of bears.

Ninety percent of soil microorganisms typically are dormant, and only half of bacterial species are active. Lennon and his co-author, Stuart Jones at the University of Notre Dame, theorize that dormancy and the presence of such large reservoirs of microbial “seed banks” have important implications for biodiversity and the stability and functioning of ecosystems services.



“Only a tiny fraction is metabolically active at any given time,” said Jay Lennon, who is affiliated with MSU’s Kellogg Biological Station and MSU’s AgBioResearch. “How would our environment be altered, in terms of carbon emissions, nutrient cycling and greenhouse gases as nitrous oxide, by dynamic increases or decreases in the dormancy of microbes?”

“We found that dormancy and seed banks are prevalent in most ecosystems,” Lennon said. “What’s fascinating is that there’s only a small fraction that are active, which means there’s a large reservoir that could potentially be activated at any given time.”

Dormancy and the seed bank effect make microbes more resilient and could play key roles in microbial biodiversity. Dormancy could help explain the sudden outbreak of diseases, perhaps sparked by some change in the environment.

“One-third of the world’s population carries dormant tuberculosis microbes,” he said. “Obviously, you can live a long time with the dormant cell in your body, but it’s important to understand what can trigger its reanimation or what maintains its dormancy.”

Lennon’s research is funded in part by the National Science Foundation (NSF).

For more information about Dr. Jay Lennon and his research, visit <http://www.kbs.msu.edu/people/faculty/lennon>.

## Jr. Audubon Club is Family Birding Fun

The Jr. Audubon Club of Kalamazoo, Calhoun and Barry counties is a monthly club for 3rd to 12th graders and their families. The club meets year-round at various locations and focuses on bird identification skills and the natural world. The Jr. Audubon Club schedule can be found at [www.bit.ly/jraudubonclub](http://www.bit.ly/jraudubonclub).

Club fees are \$20/yr. for the first child and \$15/yr. for each additional child. Memberships include a name badge and certificate, bird-tastic information packets, a Michigan Bird Checklist, access to binoculars and bird reference books, and e-mail updates on upcoming programs and festivals.

Partner organizations include Kellogg Bird Sanctuary, Kalamazoo Nature Center, Audubon Society of Kalamazoo and Battle Creek Brigham Audubon.

For more information or to register, contact the Bird Sanctuary at 269-671-2510 or e-mail [birdsantuary@kbs.msu.edu](mailto:birdsantuary@kbs.msu.edu).



## Summer Science Camp at Kellogg Bird Sanctuary

July 11-15 Critter Quest  
 July 18-22 Aquatic Adventure  
 July 25-29 Winged Wonders

**Who:** Children in grades 1st - 6th

**When:** Monday - Friday, 8:30 a.m. to 3 p.m. Parents may choose an early drop-off time at 8 a.m. for an additional fee.

**Registration:** Call 269-671-2510 after April 1.

**Cost:** \$120 for Sanctuary members or \$130 for non-members. *Discounts for sibling and "early bird" registration are available (before May 15, 2011).*



## Upcoming Kellogg Bird Sanctuary Events

<b>Soaring Birds</b>	<b>Tuesday, Apr 5</b>	<b>1 to 2:30 p.m.</b>
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Learn about the special adaptations that enable some birds to soar, and find out which soaring birds fly the skies of Michigan. Following the program, children can make their own soaring bird to take home.

Members, \$3/adult and \$1/child; non-members, \$5/adult and \$3/child.

<b>Birds and Beans</b>	<b>Wednesdays: Apr 13, May 11, Jun 8</b>	<b>8:30 to 10 a.m.</b>
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Enjoy bird watching? Take a walk with Sanctuary staff to identify birds in the area, followed by a discussion and a cup of Birds and Beans® coffee.

Birds and Beans® coffee is grown with bird-friendly practices and is available for purchase at the Bird Sanctuary.

Members, free; non-members, \$4/adult, \$3/senior citizen and \$2/child (general admission).

<b>Earth Day</b>	<b>Friday, Apr 22</b>	<b>All Day</b>
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Free Admission.

<b>Wild Wednesdays</b>	<b>June 22, July 6 &amp; 20 and Aug. 3 &amp; 17</b>	<b>7:30 p.m.</b>
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Each one-hour Wild Wednesday program has a unique theme with hands-on activities that families with children ages 4 to 7 yrs. will enjoy.

Members, free; non-members, \$4/adult, \$3/senior citizen and \$2/child (general admission).

**For more information about Kellogg Bird Sanctuary programs, call 269-671-2510, e-mail [birdsantuary@kbs.msu.edu](mailto:birdsantuary@kbs.msu.edu) or visit [www.kbs.msu.edu/sanctuary](http://www.kbs.msu.edu/sanctuary).**

## Garden Education Day - Sponsored by the W.K. Kellogg Manor House Rose & Thistle Club

Spring will soon be here – time to start preparing for summer gardens. If you are interested in learning about gardening, plan to attend the Garden Education Day on Thursday, May 5 from 8:30 a.m. to 3 p.m.

Participants may choose four sessions from a variety of workshop topics, including all season color, container gardens, curb appeal, daylilies, garden design, Michigan birds, Michigan shrubs, rain gardens, tree and plant pruning and water fountains.

All sessions will be held at the KBS Academic Center and led by local experts from Leila Arboretum, KBS, River Street Flowerland, Wenke Greenhouses and Wildbirds Unlimited.

Cost is \$40 (includes light continental breakfast and lunch). Pre-registration is required by Thursday, April 28.

For additional information, contact 269-671-2160 or e-mail [manorhouse@kbs.msu.edu](mailto:manorhouse@kbs.msu.edu).



Kellogg Manor Knot Garden

## Kellogg Manor House Events

### Manor House Tours

Kellogg Manor is open for tours the following Sundays (Free Admission).

Apr 3 1 to 5 p.m. (last tour at 4:30 p.m.)  
Aug 14 4:30 to 6:30 p.m. (last tour at 6 p.m.)

Guided group tours are also available; reservations are required. Cost is \$4 per person.

Kellogg Manor is open for self-guided tours most weekdays; tours are free, but donation suggested. Call ahead for availability.

To make reservations for a group guided tour or a self-guided tour, call 269-671-2160 or e-mail [manorhouse@kbs.msu.edu](mailto:manorhouse@kbs.msu.edu).



### Jazz in the Gardens

The Manor House will again host Jazz in the Gardens at KBS. Join us by the lake on Sunday, Aug. 14 from 3 to 5 p.m. and enjoy the music of The Cereal City Concert Band. Free admission.

Begin your day by attending Sunday Brunch at Kellogg Manor (11 a.m. or 1 p.m.) followed by the concert on the grounds, then walk in Mr. Kellogg's footsteps during a guided tour of the Manor (4:30 to 6:30 p.m.).

For additional information about Kellogg Manor Tours and Jazz in the Gardens, call 269-671-2160, e-mail [manorhouse@kbs.msu.edu](mailto:manorhouse@kbs.msu.edu) or check [www.kbs.msu.edu/manorhouse](http://www.kbs.msu.edu/manorhouse).

## KBS Conference Center

### Sunday Brunches

Apr 24 Easter Brunch  
May 8 Mother's Day Brunch  
Aug 14 Sunday Brunch

Seatings offered at 11 a.m. and 1 p.m.; reservations required.

Prices are \$25 for adults, \$20 for seniors, and \$15 for children.

### Spring and Summer Teas

Manor House Teas are popular events. Call and make your reservation now for upcoming teas:

May 17 Garden Tea  
Jun 14 Celebrate Friends Tea  
Aug 23 Literary Tea, "My Father the Captain: My Life with Jacques Cousteau" by Jean-Michel Cousteau

Teas begin at 3 p.m. Cost is \$25 for adults and \$15 for children. Reservations required.

### Celebrations

The KBS Conference Center offers full catering services, overnight accommodations, and conference facilities for social or business events.

Whether planning a business retreat, private family gathering or a wedding, our experienced staff will help you plan a memorable event.



For more information about Manor House and Conference Center events or to make a reservation, call 269-671-2400 or e-mail [conference@kbs.msu.edu](mailto:conference@kbs.msu.edu).

## Funds needed to Replace Kellogg Bird Sanctuary Bridge

In 2008 the Kellogg Bird Sanctuary bridge was closed when the underwater structural footings were found unstable. Although the closing of the bridge was unexpected news, it became an opportunity. Replacement plans include a new Americans With Disabilities Act (ADA) compliant bridge that will accommodate strollers and wheelchairs more comfortably and be safe for generations to come.

The old bridge was a place where many visitors became engaged and later married; held Girl Scout "Bridging Over" ceremonies; and took annual family photos. School field trips created memories for children as they followed tour guides over the bridge.



Artist's Rendering of New Bridge (Byce Engineering).

The replacement bridge cost is estimated at \$79,000. To date, the Bird Sanctuary has raised \$23,500 through community grants and private donations, but there is still a long way to go to meet the goal.

With your help, we can replace the bridge this year and provide all visitors a chance to create - or recreate - memories of their visit to the Kellogg Bird Sanctuary. To make an on-line donation, visit <http://bit.ly/birdbridge>.

### Invest in the future and help continue the legacy!

- |   |   |
|---|---|
| <input type="checkbox"/> Bird Sanctuary-Bridge Fund | <input type="checkbox"/> Conservation Legacy Fund |
| <input type="checkbox"/> Farm/Dairy Center          | <input type="checkbox"/> Kellogg Manor House      |
| <input type="checkbox"/> Land & Water Unit          | <input type="checkbox"/> Volunteer Program        |
| <input type="checkbox"/> Morofsky Library           |   |

### Scholarships and Fellowships

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|---|--|
| <input type="checkbox"/> Joe Johnson Fellowship | <input type="checkbox"/> George H. Lauff Scholarship |
| <input type="checkbox"/> Noall Scholarship      | <input type="checkbox"/> Porter Graduate Fellow Fund |
| <input type="checkbox"/> Benjamin Skulnick Fund | <input type="checkbox"/> P.A. Werner Scholarship     |

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Please accept my gift of \$\_\_\_\_\_. Make checks payable to **MSU**.

Please send this form with your donation to:

**Community Relations Office, W.K. Kellogg Biological Station,  
3700 E. Gull Lake Drive, Hickory Corners, MI 49060**

To make a donation with a credit card, call 269-671-2263.

**Your generous tax deductible gift is greatly appreciated.**

**E-Station to Station** is a monthly one-page e-mail newsletter that includes upcoming events and research updates.

Would you like to receive the E-Station to Station? Send your e-mail address to [communityrelations@kbs.msu.edu](mailto:communityrelations@kbs.msu.edu).

Previous newsletters are available at [www.kbs.msu.edu/community-outreach/newsletter](http://www.kbs.msu.edu/community-outreach/newsletter).

## Biofuels Grant Received

Dennis Pennington, a Bioenergy Educator with the KBS Land and Water Unit, recently received a grant to study biofuel crop production on non-traditional lands in Michigan.

One concern of bioenergy crop producers is not jeopardizing the food production system by converting lands to the production of energy crops. Scientists and researchers are exploring ways to continue producing an abundant food supply simultaneously with energy crops. This could involve using non-traditional cropland, such as highway right-of-ways, airports and vacant urban land.

This grant-funded project will establish bioenergy crop plots on four highway sites, three airports and two vacant urban sites. Switchgrass, canola, oriental mustard and pennycress will be planted and evaluated for crop productivity.

Funding for this project comes from the Michigan Department of Energy, Labor and Economic Growth. For further information, please contact Dennis Pennington at [pennin34@msu.edu](mailto:pennin34@msu.edu) or 269-838-8265.

## Thank you

A special thank you to the following donors for making the new Kellogg Manor House walkway possible:

**AIM Asphalt, Inc.  
Dr. David Dvorak  
Dr. George Lauff  
Dr. and Mrs. Russell Mawby  
Karol Peterson  
KBS Grounds Department  
Lindsey Construction Co., Inc.**

The new access creates a direct walkway from the curb to the Manor's front door and provides additional space for guests to safely exit vehicles in the driveway.



## KBS K-12 Partnership Students Gain Authentic Research Experiences as Part of "BEST" Schoolyard Research Network

Last fall, students and science teachers working with MSU graduate students participating in the GK-12 program at KBS planted the seeds for the "BEST" (BioEnergy SusTainability) Plots Schoolyard Research Network.

The network includes more than 300 research plots at 22 schools in 11 districts and 6 counties in southwest Michigan. The research plots mimic long-term, collaborative research at the KBS Long-term Ecological Research (LTER) site and Great Lakes Bioenergy Research Center (GLBRC).

KBS faculty, staff, and graduate students are collaborating with teachers on experimental design, research protocols, and curriculum development for the research network. Students planted switchgrass and native prairie seeds on their research plots. Both are crops that researchers at KBS are studying for their potential value as bioenergy crops.

Over the next 5 years, students will make observations and take measurements about the biodiversity, productivity, and soil quality on these plots to answer the question, "Can we grow our fuel and our flowers and butterflies too?"

For more information about the KBS GK-12 project and the BEST Plots Schoolyard Research Network, see <http://kbsgk12project.kbs.msu.edu> or contact project director Tom Getty ([getty@kbs.msu.edu](mailto:getty@kbs.msu.edu)) or project manager Robin Tinghitella ([hibbsr@msu.edu](mailto:hibbsr@msu.edu)).



[www.kbs.msu.edu](http://www.kbs.msu.edu)

269-671-2263 or [communityrelations@kbs.msu.edu](mailto:communityrelations@kbs.msu.edu).

the Community Relations Office at

Your comments are welcome; call or e-mail

KBS Station to Station, Spring and Summer 2011

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