

**APRIL 2015**

### **Remembering John Taylor**

John H. Taylor Jr., a career journalist who served on Stroud Water Research Center's board of directors since June 2009, died on April 4 after a tough battle with cancer.

### **Re-Wilding Tropics Starts With Clean Fresh Water**

Water and habitat quality decline when each piece of forest is traded for human activities. As the human population swells, how do we reduce stress on tropical ecosystems?

### **Dansko Co-Founders Honored for Their Support**

Our public outreach wing has been dedicated to Mandy Cabot and Peter Kjellerup, long-term supporters of Stroud Water Research Center.

### **Two Hellos and a Goodbye in Entomology Group**

Our entomology staff have more than 100 years of combined experience working at the Stroud Center. They've recently welcomed two members and said farewell to another.

### **Education Department Recognized for Outstanding Programs**

The Pennsylvania Association of Environmental Educators honored two of our programs with their Outstanding Environmental Education Program Award.

### **Event Calendar**



## **Remembering John Taylor**

**John H. Taylor Jr., a career journalist who served on Stroud Water Research Center's board of directors since June 2009, died April 4 after a tough battle with cancer. He was 71 years old.**

"Since his first board meeting, John asserted that our highly sophisticated scientific research on fresh water was of limited value unless we effectively communicated our findings to the public. And he was right," said director Bern Sweeney, Ph.D. "He will be greatly missed."

Taylor worked as a reporter, metro editor and editorial editor for The News Journal, a Delaware newspaper, for 37 years. In July 2005, he became executive director and senior vice president of the Delaware Public Policy Institute, a nonpartisan, nonprofit organization focused on policies, programs and issues affecting the state of Delaware.

He was instrumental in creating the communications department at Stroud Water Research Center and was an active member of the board's communications committee, even as his health declined.

"He was a quiet giant with a very pleasant way of expressing himself," recalled fellow board member Peter Kjellerup, who served on the communications committee with Taylor. "He had a big world vision of what the Stroud Center should be doing with its outreach, and he was happy to share his knowledge and experience to help us accomplish that goal."

Sweeney recalled that he met Taylor after joining a private dinner club whose members meet monthly to discuss local, national and global issues. "When I hosted a dinner at the Stroud Center, John, who was a member of the club, came up to me and said, 'I really like what

you guys are doing. But you are the best kept secret in the region; no one knows about you. I would really like to help you fix that.”

In 2012, Taylor conducted two video interviews with Sweeney for Content Delaware because, “Much of the Stroud Center’s work has direct implications for the people in Delaware,” he said.

**“John was a socially conscious man who fully invested himself in causes he cared deeply about,” said Rodman W. Moorhead III, Stroud Center’s board chairman.**

Board member emeritus John Fisher,

VMD, added, “He was an amazing man, one I feel so grateful to have met through the Stroud Center.”

According to The News Journal, Taylor was a strong advocate for providing Delaware children with a high-quality education. He was a member of the executive committee of Vision 2015, a statewide, business-directed education reform effort in Delaware.

In 1968, he left The News Journal to become assistant to the superintendent of schools for Wilmington’s Board of Public Education, where he worked from 1968 to 1971. He returned to The News Journal in 1971, where he worked for the next 34 years.

He was a senior vice president of the Delaware State Chamber of Commerce and executive director of the Delaware Public Policy Institute. He was a member of the Delaware Community Foundation board of directors and the Christiana Care Health System board of directors. He also was a member of the boards of the Ministry of Caring, Serviam Media, the Delaware Children’s Campaign, the William P. Frank Scholarship Fund, Inc., and a member of the Nemours Health and Prevention Services Advisory Committee.

Taylor’s memorial service will be held at 10:30 a.m., April 19 at the Cab Calloway School of the Arts, 100 N. DuPont Road, Wilmington, Delaware.



Stroud Water Research Center board of directors, from left: Porter Schutt, Peter Kjellerup, Barbie Riegel, Donnan Sharp, Rod Moorhead, Franny Abbott, Fred Meserve, John Taylor, Bernard Sweeney, Robert F. Kennedy, Jr. (awardee, not a board member), Anne Stroud Hannum, Claiborne Smith and Bob Whetzel at the Stroud Center’s 2014 Water’s Edge gala. Photo: Yeda Arscott

## Re-Wilding Tropical Ecosystems Starts With Clean Fresh Water

Stroud Center Director Bern Sweeney, Ph.D., traveled to Costa Rica in late January to discuss innovative practices in re-wilding tropical ecosystems including rainforests, mangrove forests, streams and wetlands.

The workshop was held at the Piro Biological Research Station on the Osa Peninsula in Costa Rica. It was organized by Osa Conservation and the Bobolink Foundation and was attended by leading conservation practitioners.

The Osa Peninsula harbors 2.5 percent of the world’s biodiversity in just 700 square miles of forest habitat and coastal marine areas, leading



National Geographic to name it “the most biologically intense place on earth.”

Sweeney’s presentation focused on the importance of forest buffers for improving in-stream habitat and water quality. “Re-wilding tropical ecosystems starts with clean fresh water,” Sweeney told attendees.

**“Water is the lifeblood of wildlife.”**

“Water and habitat quality decline when each piece of forest is traded for human activities,” Sweeney stated, adding that the solution is to “create a little space between the danger of what we are doing



and what we are trying to protect by filling it in with native plants—specifically riparian forest buffers.”

Sweeney pointed to an extensive scientific literature review he conducted with Stroud Center colleague Denis Newbold, Ph.D., in which — after reviewing 238 studies — they concluded that 100-foot-wide buffers are needed to protect the physical, chemical and biological integrity of small streams.

At this width, Sweeney said, the review showed that buffers can keep approximately 48 percent of nitrogen from getting into the stream. But the bad news, he added, is that approximately 52 percent of the nitrogen still passes through the buffer into the stream.

Fortunately, forest buffers can also enhance the health of the stream ecosystem itself so that it better processes nutrients such as nitrogen and keeps them from going further downstream where they degrade our large rivers and estuaries.

In addition to ecosystem benefits, Sweeney said, forest buffers benefit landowners by preventing the spread of sediment and cryptosporidiosis (“Crypto”), one of the most common waterborne diseases in the world. He

added that a riparian forest will also reduce the number of insect pests on the farm, such as blackflies, which cause livestock infections.

### ÁLVARO UGALDE, FATHER OF COSTA RICA'S NATIONAL PARKS SYSTEM, DIES AT 68



Soon upon his return to the United States, Sweeney was saddened to learn of the death of his friend and conservation colleague Álvaro Ugalde, whom he enjoyed spending time with while in Costa Rica.

Ugalde, a biologist by training, along with Mario Boza, is considered a father of Costa Rica’s world-famous national parks system. He died February 15 of a heart attack at his home.

“Throughout his life, Ugalde worked to preserve Costa Rica’s national parks by teaching people about the benefits of

preserving land for future generations,” said Sweeney.

In the 1970s, Ugalde and Boza advanced the idea of converting watersheds into national parks. As a result of their efforts, the first national park, Poás Volcano, was founded in 1970.

In the beginning, Ugalde and Boza had trouble selling the idea because many saw the national parks as unaffordable luxuries for a developing nation. However, decades later, after millions of visitors made tourism the primary source of foreign exchange income for the country, the value of the parks as a magnet for tourists became apparent.

Conservationists are trying to carry out their vision of connecting the parks by “corridors” of protected areas that would guarantee the preservation of gene pools for the many species endemic to Costa Rica. Now, a total of 166 protected areas, both public and private, safeguard Costa Rica’s natural resources.

Stroud Water Research Center sends its condolences to Ugalde’s family, friends and colleagues.

Photo of Ugalde by E. Carrillo, La Nación

## Dansko Co-Founders Honored for Their Support

Stroud Water Research Center recently dedicated the Cabot-Kjellerup Public Outreach Wing of its Moorhead Environmental Complex in honor of Dansko co-founders Mandy Cabot and Peter Kjellerup, who have been generous, long-term supporters of the Center.

“When you look around at the names on the different spaces of this building, it’s like a who’s who in the history of Stroud Water Research Center,” said Director Bern Sweeney, Ph.D.

“Our spaces are named for people who have a deep and personal connection to our work and mission. That’s why I’m really happy to see Peter and Mandy’s names on our public outreach wing

because without their support, we wouldn’t be standing in this beautiful building today.”

He said Kjellerup suggested building the outreach and education complex after learning that the research wing had become too cramped, particularly after Stroud Center expanded its mission to include education and watershed restoration.

Kjellerup made the first generous donation to kickstart the building’s fundraising drive. He also insisted, along with Sweeney, that — in keeping with Stroud Center’s mission — the building would have to be LEED® (Leadership in Energy and Environmental Design)

certified. “Dansko’s headquarters, in West Grove, Pennsylvania, is LEED® Gold certified. He encouraged Stroud Center’s



board of directors and executive staff to settle for nothing less than LEED Platinum certification — the highest, most difficult level to achieve.

“I’m very humbled and grateful to Stroud Center for this honor,” Kjellerup said.

He recalled that his commitment to Stroud Center began when he and Mandy, along with many Dansko employees, volunteered for tree planting events to protect the White Clay Creek that runs through the property.

He added that he became enthusiastic about Stroud Center’s work when he learned about its exceptional

research that informs freshwater stewardship and public policy.

Many Dansko and Stroud Center employees attended the festive unveiling ceremony on March 26. Kjellerup serves on Stroud Center’s board of directors and is an active member of its communications committee.

Dansko is an employee-owned footwear company and a founding member of B Corporation. The B stands for benefit. Member companies meet rigorous standards for social and environmental performance, accountability and transparency.



Mandy Cabot and Peter Kjellerup, along with many Dansko employees, have helped Stroud Center plant trees to protect stream health.

## Hello and Goodbye: Entomology Group Welcomes Two, Bids Farewell to Another

### HELLO, SHERMAN ROBERTS

More than 40 years ago, when Sherman Roberts was scarcely out of high school and unsure of what career path to take, his aunt suggested volunteering at Stroud Water Research Center. “I was kind of a dazed, confused young man,” he says. So he took her advice, and that was it for Roberts: “I found my niche.”

He started as a volunteer and quickly worked his way up to become a full-time research technician. Detailed-oriented and an outdoor enthusiast, Roberts was and is well-suited to the field work and processing of water and insect samples that are required for the position.

Nearly every research group at Stroud Center has benefited from his skills and work ethic. When he started in 1972, he worked under Robin Vannote, director emeritus, in the Entomology Group. Eager to learn and assist wherever needed, he moved into the Microbiology Group and then Biogeochemistry.

Now back in Entomology, his time at Stroud Center has come full circle. John Jackson, Ph.D., who leads the Entomology Group, comments, “Sherman has long been known for his flexibility and enthusiasm.”

As much as he enjoys the work, he



Our 2015 Entomology technicians get pretty excited about field work. Here Sherman Roberts (far left) and Dave Funk (far right) point to a map marked by push pins indicating stream sites they’ve worked on. Center, from left: Sally Peirson, Kelly McIntyre, Jan Battle and Mike Broomall. Photo: Kay Dixon

says he most values “the remarkable group of people here. We couldn’t do what we do without the dedication we have toward the work and toward each other.” Roberts proudly acknowledges that the Entomology Group’s field and technical staff has more than 100 years of combined experience working at Stroud Center.

### HELLO, KELLY MCINTYRE

Kelly McIntyre came to Stroud Center as an intern last May. She graduated with a Bachelor of Science in environmental science from Dickinson College in May and was subsequently hired in January to work as a research technician for the Entomology Group.



With guidance from her more experienced colleagues in the group, McIntyre is learning to sort insect samples to the genus and species levels. “The people here are very concerned with integrity and making sure we properly identify species,” she says.

Everyone in this group is everything I could have hoped for: They’ve been welcoming and kind, and they’re always willing to help me learn and grow here. I’m surrounded by amazing minds and also kindhearted people.”

Of McIntyre, Jackson says, “Her energy and laugh are a positive and contagious addition.”

During her time at Dickinson, McIntyre worked for the Alliance for Aquatic Resources Monitoring, a nonprofit that teaches volunteer monitoring of streams. That experience cemented her decision to pursue a career in fresh water. “Water is a vital resource — one that’s easy to take for granted — and it’s important to know how to protect our fresh water.”



Roberta Weber (left) and Sally Peirson sample a Lancaster County stream involved in a watershed restoration project. Photo: Dave Funk

### GOODBYE, ROBERTA WEBER

Roberta Weber came to Stroud Center in April 1983 and retired in December 2014. Often referred to by Stroud Center staff as the other half of dear friend and fellow entomology technician Sally Peirson, she will be greatly missed. She dedicated 31 years of her career to the Entomology Group.

Jackson says, “She was a great co-worker, making sure each project was a success by focusing on her responsibilities

while also helping everyone else with theirs. We miss her daily — professionally and personally.”

A native of New Castle, Delaware, she attended DeLaWarr High School, where her science teacher, Mr. O’Neill, inspired her to study biology in college. She spent two years in the Philippines as a Peace Corps volunteer working in rural public health, and upon her return to the U.S., she enrolled in the University of Delaware’s entomology graduate program. Thereafter, she joined Stroud Center’s staff.

After giving so much of herself to Stroud Center, both its people and its mission, she’s enjoying some well-deserved time in her garden.

## Education Department Recognized for Outstanding Programs

Our education department recently received the Outstanding Environmental Education Program Award from the Pennsylvania Association of Environmental Educators (PAEE) for its Leaf Pack Experiment Stream Ecology Kit and Stream Schools programs.

The Leaf Pack Experiment Stream Ecology Kit is based on the scientific research technique of using the different kinds and numbers of aquatic insects living on packs of leaves in the water to assess and monitor the health of streams and rivers. Stroud Center subsequently created the Leaf Pack Network®, which enables students and citizen scientists to post and compare data generated by leaf pack experiments performed in their local streams on the Web.

Stroud Center’s Stream School programs are unique for their hands-on, boots-in-the-water approach which



Stroud Center educators, from left, Libby Gregg; Susan Gill, Ph.D.; Tara Muenz and Director Bern Sweeney, Ph.D., proudly display the Outstanding Environmental Education Program Award.

gives visiting students an in-depth, real-world science experience.

Stroud Center is one of the few

laboratories in the world devoted exclusively to research and education on stream and river ecology. Its education program was conceived in 1990 through the interest of a nearby school to have students learn more about local streams and rivers.

The ensuing education and outreach effort created a wide variety of freshwater ecology programs for students, teachers, public officials, environmental professionals, watershed groups and the general public. During the past 25 years, our educators have translated Stroud Center’s scientific findings to the world, engaging more than 52,000 students and adults in freshwater ecology and stewardship.

“This award recognizes an exemplary environmental education program that could be used as a model for educators across the state,” said Taiji Nelson,

director of public relations for the PAEE, who conferred the award to Libby Gregg Stroud Center education programs assistant, during the organization’s annual conference.

He added, “We believe your program deserves recognition for its use of innovative educational practices and technology to enhance hands-on engagement. Your commitment to increasing the reach of your programs to a wide audience is inspirational to other environmental educators.”

“I’m proud to have our education department honored by this award,” said Susan Gill, Ph.D., Stroud Center’s education director. “Our goal is to not



only excite students and adults about streams and rivers but to teach them how to be responsible stewards of freshwater resources.”

Stroud Center has launched multiple public service programs aimed at helping people — from local landowners to national and international organizations — implement best stewardship practices for streams, rivers and watersheds.

“I’m very pleased that our education department was recognized for its excellence,” said Bernard Sweeney, Ph.D., Stroud Center’s president and director. “Our resources and programs empower citizens across the globe to protect their watersheds.”

# EVENTS

FIND FULL EVENT INFORMATION AT [WWW.STROUDCENTER.ORG/EVENTS](http://WWW.STROUDCENTER.ORG/EVENTS)

<p><b>APRIL</b></p>	<p><b>23 CONVERSATION ON CONSERVATION</b> Buck and Doe Trust and the Cheshire Hunt Conservancy are hosting a discussion about land conservation in our community..</p>	<p><b>28 FREE SCIENCE TALK</b> Learn about the low-cost environmental sensors we’re building and installing in our watershed.</p>
<p><b>MAY</b></p>	<p><b>10 WILLOWDALE STEEPLECHASE</b> A day of world-class steeplechase racing to benefit Stroud Center, UPenn New Bolton Center and Quest Therapeutic Services.</p>	
<p><b>JUNE</b></p>	<p><b>06 SUSTAINABLE SPLURGES</b> A wine, cheese and chocolate tasting while enjoying the beauty of The Farm at Doe Run.</p>	

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